

AD-A141 734

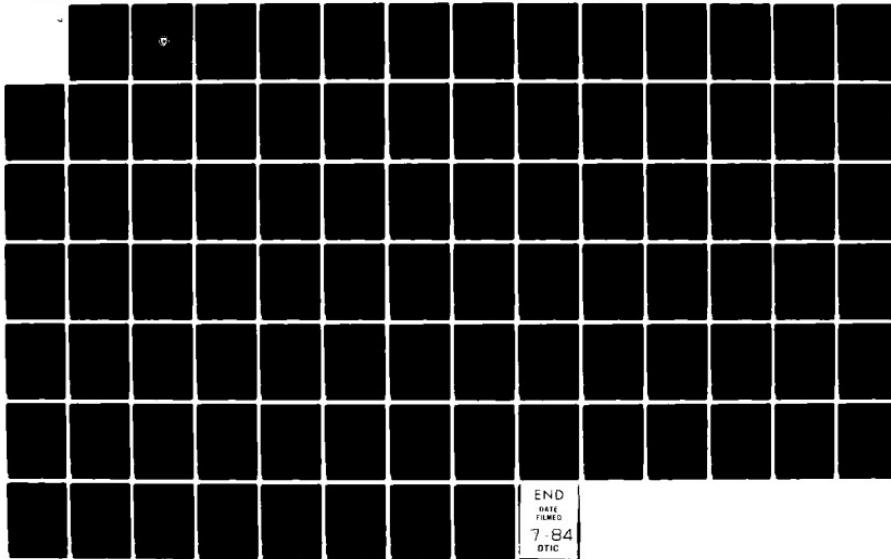
OFFICER ASSIGNMENT SYSTEM STUDY (OASYS) VOLUME 2 OSAYS
USER MANUAL(U) ARMY CONCEPTS ANALYSIS AGENCY BETHESDA
MD W SCHWARTZAPFEL ET AL. MAR 84 CAA-SR-84-1-VOL-2

1/1

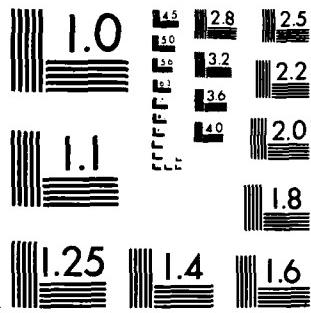
UNCLASSIFIED

F/G 5/9

N1



END
DATE FILMED
7-84
DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

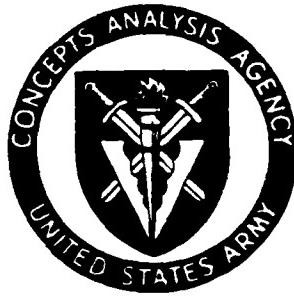
AD-A141 734

STUDY REPORT
CAA-SR-84-1

AD

**OFFICER ASSIGNMENT SYSTEM STUDY
(OASYS)
VOLUME II - OASYS USER MANUAL**

MARCH 1984



PREPARED BY
FORCE SYSTEMS DIRECTORATE

US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814

DMC FILE COPY

3 0 1984
A
This document contains neither recommendations nor conclusions of the Defense Science Board. It reflects the views of the author only. It has not been reviewed by the Defense Science Board.

84 05 30 063

DISCLAIMER

**The findings of this report are not to be construed as an official
Department of the Army position, policy, or decision unless so designated by
other official documentation. Comments or suggestions should be addressed
to:**

**Director
US Army Concepts Analysis Agency
ATTN: CSCA-FS
8120 Woodmont Avenue
Bethesda, MD 20814**

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER CAA-SR-84-1	2. GOVT ACCESSION NO. <i>AD-A141734</i>	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Officer Assignment System Study (OASYS) Volume I - Main Report Volume II - OASYS User Manual	5. TYPE OF REPORT & PERIOD COVERED Study Report	
7. AUTHOR(s) Mr. Wilbert Schwartzapfel; LTC Raymond Elderd, Mr. Robert Malay	8. PERFORMING ORG. REPORT NUMBER CAA-SR-84-1	
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Concepts Analysis Agency 8120 Woodmont Avenue Bethesda, MD 20814	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS Deputy Chief of Staff for Personnel Department of the Army ATTN: DAPF-MPD, Washington, DC 20310	12. REPORT DATE March 1984	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	13. NUMBER OF PAGES Vol I: 136; Vol II: 90	
	15. SECURITY CLASS. (of this report) Unclassified	
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Personnel; Planning; Women in the Army; Female Officers; Initial Specialty; Additional Specialty; Accessions		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The OASYS Study defined a method to determine the number of women lieutenants, by initial specialty code, to be accessed each year. It established a basis for assignments to additional specialties at the officer's eighth year of service. The computer models used require the user to input decision parameters to establish accession and "branching" criteria. Using published Army guidelines, the allocation of spaces and specialties to women officers is calculated insuring an equitable and fair distribution of existing authorizations.		

DD FORM 1 JAN 73 EDITION OF 1 NOV 68 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CAA-SR-84-1

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

(NOT USED)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

STUDY REPORT
CAA-SR-84-1

**OFFICER ASSIGNMENT SYSTEM STUDY
(OASYS)
VOLUME II - OASYS USER MANUAL**

MARCH 1984

**PREPARED BY
FORCE SYSTEMS DIRECTORATE
US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814**

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DEIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	<input type="checkbox"/>
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
<i>A</i>	
_____ <i>DRG</i>	
<i>DRG</i>	

CAA-SR-84-1

OASYS USER MANUAL

PREFACE

Volume II contains technical reference material for an ASCII FORTRAN programer using a Sperry Computer System. This reference must be used in conjunction with Volume I of the Study Report by computer programers working with OASYS. Volume I is a manager's guide to the Officer Assignment System.

CONTENTS

1.	INTRODUCTION	- 1
2.	INPUT REQUIREMENTS	- 2
2.1.	WOMEN OFFICER STRENGTH MODEL (WOSM)	- 2
2.1.1.	PERSACS OFFICER AUTHORIZATIONS (AUTH)	- 3
2.1.2.	DUTY SPECIALTY INVENTORY (DTSPEC)	- 5
2.1.3.	INSPAC/ADSPEC INVENTORY (DESIG)	- 6
2.1.4.	SPECIALTY CODES (SPECS)	- 9
2.1.5.	CASUALTY REPLACEMENT RATES (CASREP)	- 10
2.1.6.	PREFERRED DISTRIBUTION RATES (PREDIS)	- 11
2.1.7.	MISCELLANEOUS INPUTS	- 12
2.2.	AGE BY GRADE AND PAIR (AGEBGPR)	- 13
2.2.1.	SPECIALTY CODES (SPECS)	- 14
2.2.2.	INSPAC/ADSPEC INVENTORY (INV-YG-GR)	- 15
2.2.3.	FEMALE CONTINUATION RATES (CRATE)	- 16
2.2.4.	OVERALL FEMALE CONTINUATION RATES	- 17
2.2.5.	GRADE DISTRIBUTION (GRADE)	- 18
2.2.6.	LATERAL ENTRIES (REDESIG)	- 19
2.2.7.	WOSM FEMALE AUTHORIZATIONS (AUTH)	- 20
2.2.8.	THS INVENTORY (THS)	- 21
2.2.9.	RESET ACCESSION LEVELS (PRESETS)	- 22
2.2.10.	UTILIZATION RATES (URATES)	- 23
2.2.11.	SPECIALTY CODES NO DESIGNATION (NODESIG)	- 24
2.2.12.	PROPONENT PREFERENCE MATRIX (PREF-MAT)	- 25
2.2.13.	MISCELLANEOUS INPUTS	- 26
3.	RUNSTREAM	- 28
3.1.	TEMPORARY MASS STORAGE ASSIGNMENT	- 29
3.2.	PREPROCESSOR SECTION	- 30
3.3.	WOSM EXECUTION SECTION	- 30
3.4.	MERGE SECTION	- 30
3.5.	AGEBGPR EXECUTION SECTION	- 30
4.	RUN OPTIONS	- 31
4.1.	C - OPTION	- 31
4.2.	F - OPTION	- 31
4.3.	I - OPTION	- 31
4.4.	M - OPTION	- 31
4.5.	P - OPTION	- 31
4.6.	R - OPTION	- 31
4.7.	X,Y,Z - OPTIONS	- 32
5.	WOSM CODE	- 33
6.	MODIFY CONTINUATION RATES	- 75
6.1.	SOURCE CODE	- 76
6.2.	RUNSTREAM	- 76

1. INTRODUCTION

OFFICER ASSIGNMENT SYSTEM (OASYS) STUDY VOLUME II - OASYS USER MANUAL

The OFFICER ASSIGNMENT SYSTEM consists of two models - the WOMEN OFFICER STRENGTH MODEL (WOSM) and the AGE BY GRADE AND PAIR MODEL (AGEBGPR). This manual represents the only documentation for either of the two models. The OASYS user should be familiar with personnel policies and changes made to those policies. Every effort has been made to ensure that policy changes will only affect the data files used; thus code changes should not be necessary.

All capitalized keywords used in this document represent the actual variable names used in the source code for both models and the auxiliary programs.

This document consists of six sections - input requirements and associated data preprocessors, WOSM run options, runstream description, the WOSM code, the MODIFY CONTINUATION RATES source code, and this introduction.

2. INPUT REQUIREMENTS

This section details all input files used to implement OASYS. The section is split into two subsections, the first being the WOMEN OFFICER STRENGTH MODEL input files, and the second deals with AGE BY GRADE AND PAIR input files. Each subsection contains documentation for the files used, their description, and a short description of the preprocessor or input routines used. Use this section as a guide for file preparation or as a manual for understanding the wOSM and AGEBGPR code.

2.1. WOMEN OFFICER STRENGTH MODEL (WOSM)

WOSM uses the following data files :

PERSACS OFFICER AUTHORIZATIONS
DUTY SPECIALTY INVENTORY
INSPEC/ADSPEC INVENTORY
SPECIALTY CODES
CASUALTY REPLACEMENT RATES
PREFERRED DISTRIBUTION RATES

2.1.1. PERSACS OFFICER AUTHORIZATIONS (AUTH)

2.1.1.1. FILE DESCRIPTION

The AUTH file contains authorizations data extracted from the PERSACS data base. It is important to the operation of this system that all valid three-digit specialty codes be represented in this file. Each three-digit specialty code (NOS) has four logical records of data images associated with it. These data images and their WOSM data names are :

Three-Digit Specialty Code ID	(NOS)
Total Authorizations	(STRTH)
Male-Only Authorizations	(COMBAT)
Long-Tour Authorizations	(LONG)
Short-Tour Authorizations	(SHORT)
CONUS Authorizations	(CONUS)
Male-Only Long-Tour Authorizations	(CBTLNG)
Male-Only Short-Tour Authorizations	(CETSHT)
Male-Only CONUS Authorizations	(CBTCNS)
Total TAADS Authorizations	(TAADS)*
Long-Tour TAADS Authorizations	(LTAADS)*
Short-Tour TAADS Authorizations	(STAADS)*
CONUS TAADS Authorizations	(CTAADS)*

*NOTE - TAADS authorizations were not implemented in this version of WOSM; however, they were included for future use should the need arise.

2.1.1.2. RECORD DESCRIPTION

A logical record consists of four physical records. The first physical record has the following format :

NOS	COLUMNS 1 - 3
STRTH (LT - GEN)	COLUMNS 7 - 42
COMBAT(LT - GEN)	COLUMNS 43 - 73
LONG (LT - GEN)	COLUMNS 79 - 114

The second physical record contains :

SHORT (LT - GEN)	COLUMNS 7 - 42
CONUS (LT - GEN)	COLUMNS 43 - 78
CBTLN(LT - GEN)	COLUMNS 79 - 114

The third physical record format is :

CBTSHT(LT - GEN)	COLUMNS 7 - 42
CBTCNS(LT - GEN)	COLUMNS 43 - 78
TAADS (LT - GEN)	COLUMNS 79 - 114

The fourth and final physical record format is :

LTAADS(LT - GEN)	COLUMNS 7 - 42
STAADS(LT - GEN)	COLUMNS 43 - 78
CTAADS(LT - GEN)	COLUMNS 79 - 114

Note that each grade, LT through GEN, uses six fields. Also, this version of WOSM does not consider the grade of GEN for any of the computations; however, the GEN subfield must still be present since the preprocessor makes use of this field as a dummy field.

2.1.1.3. PREPROCESSOR

2.1.1.3.1. THE PROGRAM

The following ASCII FORTRAN program reads the PERSACS AUTH file and outputs a blank format, binary file - file 26. WOSM reads this binary file in the SUBROUTINE DATA.

```

INTEGER CTRI,CTR0,COMBAT(6),LONG(6),STRTH(6)
1SHORT(6),CONUS(6),CBTLNG(6),CBTSHT(6),CBTCNS(6),
2TAADS(6),LTAADS(6),CTAADS(6),STAADS(6)
  CTRI=0
  CTR0=0
1  READ (10,3,END=2) NOS,STRTH,COMBAT,LONG
  READ (10,4) SHORT,CONUS,CBTLN
  READ (10,4) CBTSHT,CBTCNS,TAADS
  READ (10,4) LTAADS,STAADS,CTAADS
  CTRI=CTR+4
  WRITE (26) NOS,STRTH,COMBAT,LONG,SHORT,CONUS,CBTLN,
1CBTSHT,CBTCNS,TAADS,LTAADS,STAADS,CTAADS
  CTR0=CTR0+1
  GO TO 1
2  WRITE (6,5) CTRI,CTR0
END FILE 26
RE=IND 26
STOP
C
3  FORMAT (A3,3X,18I6)
4  FORMAT (6X,18I6)
5  FORMAT (1H0,6X,'FILE COMPLETE',4X,I6,2X,'RECORDS READ',
14X,I6,2X,'RECORDS WRITTEN')
END

```

2.1.1.3.2. RUNSTREAM

In order to create the binary file 26 the following runstream must be used :

```

@ASG,T 10.
@ASG,T 26.
@ED AUTH.FILE,10.
EXIT
@XQT PREPROCESSOR.APSOLUTE

```

2.1.2. DUTY SPECIALTY INVENTORY (DTSPEC)

2.1.2.1. FILE DESCRIPTION

The DTSPEC file contains the female officer population currently serving in a particular specialty. Also, the file contains the specialty's percentage in THS. This file contains a physical record for each valid three-digit specialty code (*MOS). The data images associated with each record are :

Two-Digit Specialty Code ID	(ICMF)
Three-Digit Specialty Code ID	(*MOS)
THS Percentage	(THSFAC)
Female Content By Grade	(CONTNT)

NOTE - Valid specialty codes in the AUTH file (NOS) are matched with valid specialty codes in the DTSPEC file (*MOS). If a mis-match occurs, then the data for that specialty is skipped; hence, care should be taken when creating either of these two files. Also, the DTSPEC file can be used as a driver to selectively omit certain specialty codes from processing.

2.1.2.2. RECORD DESCRIPTION

A logical and physical record of the DTSPEC file consists of the following data formats :

ICMF	COLUMNS 1 - 2
MOS	COLUMNS 3 - 5
THSFAC	COLUMNS 10 - 11
CONTNT(LT - GEN)	COLUMNS 15 - 44

NOTE - As in the AUTH file the grade of GEN is not used.

2.1.2.3. INPUT ROUTINE

The DTSPEC file is entered into WOSM via the subroutine FILER. Refer to section 5 for information regarding this file and its input code.

2.1.2.3.1. RUNSTREAM

The following runstream creates file 25 for input into WOSM :

```
@ASG,T 25.  
@ED DTSPEC.FILE,25.  
EXIT
```

2.1.3. INSPEC/ADSPEC INVENTORY (DESIG)

2.1.3.1. FILE DESCRIPTION

The DESIG file contains the current female officer population by grade, year-of-service, primary specialty, and secondary specialty for grades LT through COL spanning over thirty years. Depending on the frequency of secondary specialties, a primary specialty can have from one to any number of logical records. The data images associated with a single physical record are:

Single-Digit Grade ID	(GRADE)
Two-Digit Year-Of-Service ID	(IYR)
Two-Digit Primary Specialty ID	(SPEC(1))
Two-Digit Secondary Specialty ID	(SPEC(I), I=2..11)
Four-Digit Population Amount	(INPUT(I), I=1..10)

NOTE - The number of additional specialties per physical record is limited to ten. If the number of additional specialties exceeds ten then a new physical record should be created with the same GRADE, IYR, and SPEC(1).

2.1.3.2. RECORD DESCRIPTION

A logical record can consist of any number of physical records where each physical record can contain from one to ten additional specialties. The following physical record description defines a variant number of additional specialties.

GRADE	COLUMNS 1
IYR	COLUMNS 2 - 3
SPEC(1)	COLUMNS 4 - 5
SPEC(2)	COLUMNS 7 - 8
INPUT(1)	COLUMNS 9 - 12
SPEC(3)	COLUMNS 14 - 15
INPUT(2)	COLUMNS 16 - 19
.	.
:	:

NOTE - The GRADE identifier is 1 = COL, 2 = LTC, ..., 5 = LT and the IYR identifier is 1 = present year, 2 = present year - 1, ..., 32 = present year - 29.

2.1.3.3. PREPROCESSOR

2.1.3.3.1. THE PROGRAM

The following ASCII FORTAN program reads the DESIG file and produces an input file, file 12, for the WOSM model. The input file produced is the female officer population by primary specialty and grade.

```

PARAMETER NN=36, NT=NN+1
INTEGER INVPR(NT,6), A(NN), INV(5,NN,NN), SUMM(NN),
1 INVGR(NN,NN), I,J,K,NZERO, INVSUM, ICOL(6)
DATA (A(I), I=1,NN) /11,12,13,14,15,21,22,25,27,31,35,
136,37,41,42,43,44,45,46,48,49,51,52,53,54,71,72,73,74,
275,81,82,91,92,95,97/
NZERO=0
CALL INPRGR
DO 2 K=1,5
DO 1 I=1,NN
DO 1 J=1,NN
1   INVGR(I,J)=INV(6-K,I,J)
2

```

```

CALL SUM
INVPR(NT,K)=INVSUM
DO 2 I=1,NN
INVPR(I,K)=SUMM(I)
2 INVPR(I,6)=INVPR(I,6)+SUMM(I)
DO 3 I=1,5
3 INVPR(NT,6)=INVPR(NT,6)+INVPR(NT,I)
DO 5 I=1,NN
5 WRITE(12,14) A(I),(INVPR(I,J),J=5,1,-1),NZERO
ENDFILE 12
WRITE(6,11)
WRITE(6,12)
DO 19 J=1,6
ICOL(J)=0
DO 20 I=1,NN
DO 21 J=1,5
ICOL(6)=ICOL(6)+INVPR(I,J)
ICOL(J)=ICOL(J)+INVPR(I,J)
21 WRITE(6,13) A(I),(INVPR(I,J),J=5,1,-1),NZERO,INVPR(I,6)
20 WRITE(6,26)(ICOL(J),J=5,1,-1),NZERO,ICOL(6)
WRITE(6,27)
WRITE(6,28)(INVPR(NT,I),I=5,1,-1),NZERO,INVPR(NT,6)
WRITE(6,29)
WRITE(6,30)(ICOL(I)-INVPR(NT,I),I=5,1,-1),NZERO,ICOL(6)
1-INVPR(NT,6)
WRITE(6,10)
STOP

C
14 FORMAT(12,1X,6I5)
10 FORMAT(11,1X,'FEMALE CONTENT (LT-GEN) AT LOGICAL UNIT 12')
11 FORMAT(11,1X,'TOTAL WOMEN OFFICERS DESIGNATED')
12 FORMAT(11,1X,'SPEC'3X,'LT'3X,'CPT'3X,'MAJ'3X,'LTC',
13 X,'COL'3X,'GEN'5X,'ROW TOT')
13 FORMAT(11,1X,12,1X,6I6,6X,16)
26 FORMAT(11,1X,TOTAL'6I6,6X,16)
27 FORMAT(11,1X,ACTUAL)
28 FORMAT(11,1X,INVNT'6I6,6X,16)
29 FORMAT(11,1X,ADSPEC)
30 FORMAT(11,1X,INVNT'6I6,6X,16)

C
C
C
C
C
SUBROUTINE INPRGR
INTEGER GRADE,SPEC(11),INPUT(10),I,J,K,L,M,N,LASTGR,IYR
LASTGR=1
1 READ(5,7,END=5) GRADE,IYR,SPEC(1), (SPEC(I),INPUT(I-1)
1,I=2,11)
DO 4 M=1,11
IF (SPEC(M).EQ.0) GO TO 1
IF (SPEC(M).EQ.47) GO TO 4
IF (SPEC(M).EQ.70) GO TO 4
N=SPEC(M)
CALL SPNEW(N)
IF (M.EQ.1) GO TO 3
L=N
J=5-GRADE
IF (GRADE.EQ.LASTGR) GO TO 2
LASTGR=GRADE
2 INV(J,K,L)=INV(J,K,L)+INPUT(*-1)
GO TO 4
3 K=N
CONTINUE
GO TO 1
5 RRETURN

C
C
C
7 FORMAT(11,12,12,10(1X,12,14))

C
C
C
SUBROUTINE SPNEW(N)
INTEGER I
DO 10 I=1,NN

```

```
10 IF(N.EQ.A(I)) N=I
CONTINUE
RETURN
C
C
C
C
SUBROUTINE SUM
INTEGER I,J
INVSUM=0
DO 2 I=1,NN
SUMM(I)=0
DO 1 J=1,NN
SUMM(I)=SUMM(I)+INVGR(I,J)+INVGR(J,I)
1 INVSUM=INVSUM+INVGR(I,J)
2 SUMM(I)=SUMM(I)-INVGR(I,I)
RETURN
END
```

2.1.3.3.2. RUNSTREAM

The following runstream is used to create the inout file 12 using the preprocessor code :

```
@ASG,T 12.
@XGT'PREPROCESSOR.ABSOLUTE
@ADD,E DESIG.FILE
```

2.1.4. SPECIALTY CODES (SPECS)

2.1.4.1. FILE DESCRIPTION

The SPECS file is a list of all valid two-digit specialty codes and their accession/nonaccession status. The number of physical records is equal to the number of valid specialty codes. A physical record consists of :

Two-Digit Specialty Code ID	(CMFTAB)
Single-Digit Nonaccession Flag	(NONACC)

NOTE - It is very important that all valid specialty codes be listed in this file. The DTSPEC and DESIG files use the three-digit specialty code identifier to drive WOSM through the computation phase, while the SPECS file drives WOSM through the PREFERRED DISTRIBUTION and AUTHORIZATIONS phases.

2.1.4.2. RECORD DESCRIPTION

A logical and physical record is constructed by the following data formats :

CMFTAB	COLUMNS 1 - 2
comma	COLUMNS 3
NONACC	COLUMNS 4

NOTE - CMFTAB and NONACC are arrays which are indexed according to a specialty code's numeric position in the sequence of specialty codes; thus, this file should be constructed in lowest to highest order.

2.1.4.3. INPUT ROUTINE

The SPECS file is entered into WOSM via the main program. Refer to section 5 for more information concerning this file.

2.1.5. CASUALTY REPLACEMENT RATES (CASREP)

2.1.5.1. FILE DESCRIPTION

The CASREP file consists of casualty replacement rates for D+30, D+60, and D+90 days of war by three-digit specialty code. Each record consists of the following data images:

Two-Digit Specialty Code ID	(ICMF)
Three-Digit Specialty Code ID	(MOS)
D+30 Casualty Replacement Rate	(RCAS)
D+60 Casualty Replacement Rate	(RCAS)
D+90 Casualty Replacement Rate	(RCAS)

NOTE - Only one RCAS per specialty is read into WOSM. This is achieved by using a specific run option (see section 4).

2.1.5.2. RECORD DESCRIPTION

A logical and physical record is built by using the following data format:

ICMF	COLUMNS 1 - 2
MOS	COLUMNS 4 - 6
RCAS(D+30)	COLUMNS 11 - 16
RCAS(D+60)	COLUMNS 21 - 26
RCAS(D+90)	COLUMNS 31 - 36

NOTE - The array CASRAT, in WOSM's main program, is built using the ICMF and MOS as indices. It is of extreme importance that these parameters reflect the same two and three-digit codes used in the DESIG, DTSPCC and SPFCSS files.

2.1.5.3. INPUT ROUTINE

The selected casualty replacement rates are input into the WOSM model via the main program. The selection of a casualty replacement rate depends on the run option used on the AXQT card. Refer to section 4 and section 3 for more information concerning this file.

2.1.6. PREFERRED DISTRIBUTION RATES (PREDIS)

2.1.6.1. FILE DESCRIPTION

The PREDIS file contains the preferred distribution of interchangeable spaces set aside for women officers. It is used primarily to rearrange those spaces set aside for women officers based upon a predetermined distribution when the present WOSM distribution does not satisfy the needs of personnel management. This file can only be created after a WOSM run has been completed and the distribution of female spaces is known. The PREDIS file contains a record for each valid two-digit specialty code where the fields of this record are defined as :

Two-Digit Specialty Code ID	(ISP)
Five-Digit Distribution Rate	(PCT)

2.1.6.2. RECORD DESCRIPTION

Each record is built using the following data format :

ISP	COLUMNS 1 - 2
PCT	COLUMNS 3 - 7

NOTE - Care must be taken to ensure that all two-digit specialty codes used in the PREDIS file are the same two-digit specialty codes used throughout the system.

2.1.6.3. INPUT ROUTINE

The PREDIS file is entered into WOSM via the SUBROUTINE PREDIS only if the proper run option was set (see sections #3, #4, and #5).

2.1.7. MISCELLANEOUS INPUTS

2.1.7.1. TOUR LENGTHS (STL,LTL,MAXCL)

The three tour lengths have been removed from the WOSM code as constants. They can now be entered into WOSM as parameters. WOSM reads these parameters from the runstream via the main program (see section 5 and section 3). The tour lengths defined as:

Two-Digit Short-Tour Length	(STL)
Two-Digit Long-Tour Length	(LTL)
Two-Digit Maximum CONUS Tour	(MAXCL)

NOTE - Tour lengths are represented as months and are coded in the runstream beginning in column 1 separated by a space.

2.1.7.2. MAXIMUM FEMALE STRENGTH CONSTRAINT (NUM)

The NUM parameter is read into WOSM by the SUBROUTINE FILER only if the constrained run option has been turned on (see section 4).

This parameter is coded in the runstream and is read by WOSM using a blank format read statement; thus, NUM can be any size integer the user wishes (see section 3).

2.2. AGE BY GRADE AND PAIR (AGEBGPR)

The AGEBGPR MODEL uses the following data files :

SPECIALTY CODES
INSPEC/ADSPEC INVENTORY
FEMALE CONTINUATION RATES
OVERALL FEMALE CONTINUATION RATES
GRADE DISTRIBUTION
LATERAL ENTRIES
WOSM FEMALE AUTHORIZATIONS
THS INVENTORY
PRESET ACCESSION LEVELS
UTILIZATION RATES
SPECIALTY CODES NOT DESIGNATED FOR ADSPEC
PROPOSER PREFERENCE MATRIX

The following files are necessary to the operation of OASYS : SPECIALTY CODES, INSPEC/ADSPEC INVENTORY, FEMALE CONTINUATION RATES, OVERALL FEMALE CONTINUATION RATES, GRADE DISTRIBUTION, WOSM FEMALE AUTHORIZATIONS, UTILIZATION RATES, and the PROPOSER PREFERENCE MATRIX. The remaining files are optional.

2.2.1. SPECIALTY CODES (SPEC'S)

2.2.1.1. FILE DESCRIPTION

The SPECS file used in AGEBGPR is the same file used in WOSM. For documentation concerning this file refer to the FILE DESCRIPTION (section 2.1.4.1) in the WOSM input file section.

2.2.1.2. RECORD DESCRIPTION

Refer to WOSM input file section (section 2.1.4.2)

2.2.1.3. INPUT ROUTINE

The SPECS file is read into the AGEBGPR MODEL by the main program. All previous warnings as to the integrity of the two digit specialty codes used applies also to the AGEBGPR MODEL.

2.2.2. INSPEC/ADSPEC INVENTORY (INV-YG-GR)

2.2.2.1. FILE DESCRIPTION

The INV-YG-GR file is the same file (DESIG) used in WOSM. Refer to the WOSM input file section for details concerning this file (section 2.1.3.1)..

2.2.2.2. RECORD DESCRIPTION

Same as the DESIG file used in WOSM. Refer to WOSM input file section (section 2.1.3.2).

2.2.2.3. INPUT ROUTINE

The INV-YG-GR file enters AGEBCPR via the main program. All year groups are read into the model, those year groups are "aged" a single year, the resulting 8th year group gets additional specialties, and the calculated new 2d LT (acquisitions) year group is added to the INV-YG-GR file. When AGEBCPR is executed for a period of successive years, the INV-YG-GR file is internally read by the model; thus, a new inventory is created, output, and read by the same program (see section 3).

2.2.3. FEMALE CONTINUATION RATES (CRATE)

2.2.3.1. FILE DESCRIPTION

The CRATE file contains by two-digit specialty and year group the continuation rate for female officers. Each specialty has three records associated with it. The data inades for those records are :

Two-Digit Specialty Code ID (ISP)
Four-Digit Continuation Rate For Each Yr.(RINPUT)
(includes decimal point)

2.2.3.2. RECORD DESCRIPTION

The data formats for the three records for each specialty code are :

RECORD 1 =====

ISP	COLUMNS 1 - 2
comma	COLUMN 3
RINPUT(1)	COLUMNS 4 - 7
comma	COLUMN 8
RINPUT(2)	COLUMNS 9 - 12
.	.
.	.
RINPUT(10)	COLUMNS 40 - 52

RECORD 2 =====

RINPUT(11)	COLUMNS 1 - 4
comma	COLUMN 5
RINPUT(12)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
.	.
RINPUT(20)	COLUMNS 46 - 49

RECORD 3 =====

RINPUT(21)	COLUMNS 1 - 4
comma	COLUMN 5
RINPUT(22)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
.	.
RINPUT(30)	COLUMNS 46 - 49

2.2.3.3. INPUT ROUTINE

The CRATE file is read into AGEBGPR by the SUBROUTINE READCR. READCR places the CRATEs into a matrix called 'CRATE' where the row is indexed by the year group and the columns are indexed by the two-digit specialty code.

NOTE - The CRATE file used by the AGEBGPR MODEL was created by a preprocessor, MOD-CRATES. See the MODIFY CONTINUATION RATES pre processor code for more information (section 6).

2.2.4. OVERALL FEMALE CONTINUATION RATES

2.2.4.1. FILE DESCRIPTION

This file represents the OPMD overall continuation rate for year groups one through thirty. It contains three records where the data image for those records is :

Four-Digit Continuation Rate by Yr.Group (CRATE)
(includes decimal point)

2.2.4.2. RECORD DESCRIPTION

The data formats for the three records are :

RECORD 1
=====

CRATE(NT,1)	COLUMNS 1 - 4
comma	COLUMN 5
CRATE(NT,2)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
CRATE(NT,10)	COLUMNS 46 - 49

RECORD 2
=====

CRATE(NT,11)	COLUMNS 1 - 4
comma	COLUMN 5
CRATE(NT,12)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
CRATE(NT,20)	COLUMNS 46 - 49

RECORD 3
=====

CRATE(NT,21)	COLUMNS 1 - 4
comma	COLUMN 5
CRATE(NT,22)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
CRATE(NT,20)	COLUMNS 46 - 49

NOTE - The variable NT represents the last row of the CRATE matrix. The completed matrix is indexed by the year groups one through thirty plus the OPMD average for the rows and the columns are indexed by the two-digit specialty codes.

2.2.4.3. INPUT ROUTINE

This file enters AGEBGPR by the SUBROUTINE READCR. It is the last read statement of this routine.

2.2.5. GRADE DISTRIBUTION (GRADE)

2.2.5.1. FILE DESCRIPTION

The GRADE file contains integer formatted data by years of service for 2d LT through COL. It represents the ideal distribution of grades based on given year-of-service. There are thirty records, one for each year-of-service, consisting of six fields :

Five-Digit Grade Distribution Rate (GRADE)

2.2.5.2. RECORD DESCRIPTION

Each record consists of the following fields :

GRADE(1)	COLUMNS 1 - 5
comma	COLUMN 6
GRADE(2)	COLUMNS 7 - 11
comma	COLUMN 12
GRADE(3)	COLUMNS 13 - 17
comma	COLUMN 18
GRADE(4)	COLUMNS 19 - 23
comma	COLUMN 24
GRADE(5)	COLUMNS 25 - 29
comma	COLUMN 30
GRADE(6)	COLUMNS 31 - 35

2.2.5.3. INPUT ROUTINE

The GRADE file is read into AGEBUGPR via the SUBROUTINE READGR. Grades 1 and 2 (2d LT and 1st LT) are added together resulting in a rate for all LTs. READGR returns a matrix of fractional distribution rates where the rows are indexed by the grade (LT=1,...,COL=5) and the columns are indexed by the year-of-service (1 - 30).

2.2.6. LATERAL ENTRIES (REDESIG)

2.2.6.1. FILE DESCRIPTION

The REDESIG file contains by year group and specialty the total number of female officers redesignated to another specialty. This file can contain any number of records where the elements of a record are :

Two-Digit Year-of-Service ID	(J)
Two-Digit Current Specialty ID	(INPUT(1))
Two-Digit Re-designated Specialty ID	(INPUT(2))
Total Population To Be Redesignated	(NUM)

2.2.6.2. RECORD DESCRIPTION

The REDESIG file is read into AGEFGPR using a blank format; thus column specifications are free-format. The only restriction being that all fields should be separated by a comma. The following is an example :

J	COLUMNS 1 - 2
comma	COLUMN 3
INPUT(1)	COLUMNS 4 - 5
comma	COLUMN 6
INPUT(2)	COLUMNS 7 - 8
comma	COLUMN 9
NUM	COLUMNS 10 -

NOTE - The NUM field begins in column 10 and spans the number of columns needed to represent the population to be redesignated as an integer number.

2.2.6.3. INPUT ROUTINE

The REDESIG file is input into AGEFGPR via the main program prior to calculating the new year group accessions. If there are no redesignations then replace the A&D card with an EOF card (see section 3).

2.2.7. WOSM FEMALE AUTHORIZATIONS (AUTH)

2.2.7.1. FILE DESCRIPTION

The AUTH file represents the link between AGEBGPR and WOSM. It contains the distribution of female officer authorizations by two-digit specialty code and grade. WOSM outputs this file in the SUBROUTINE FILTER or in the SUPROUTINE PREDIS depending on the run option used (see section 4). This file contains a record for each valid two-digit specialty code. The data images defined are (using AGEBGPR keywords) :

Two-Digit Specialty Code ID	(ISP)
Five-Digit Auth. Amount by Grade	(INPUT)
Five-Digit Total Auth. for All Grades	(TOTAL)*

NOTE - The TOTAL field is not used by AGEBGPR but is included in the file for information purposes.

2.2.7.2. RECORD DESCRIPTION

Each record is defined by the following data formats :

ISP	COLUMNS 2 - 3
INPUT(1) = COL	COLUMNS 4 - 8
INPUT(2) = LTC	COLUMNS 9 - 12
INPUT(3) = MAJ	COLUMNS 14 - 18
INPUT(4) = CPT	COLUMNS 19 - 23
INPUT(5) = LT	COLUMNS 24 - 28
TOTAL	COLUMNS 29 - 33

2.2.7.3. INPUT ROUTINE

This file is read into AGEBGPR at two points - (1) the SUBROUTINE ACCESS reads all the grade fields of this file prior to calculating the accessions, and (2) the main program reads only the field grade authorizations prior to ADSPEC designation.

2.2.8. THS INVENTORY (THS)

2.2.8.1. FILE DESCRIPTION

The THS file contains the current population of female officers in THS by grade, primary specialty, and secondary specialty. The structure of this file is similiar to the INSPEC/ADSPEC inventory file with the exception of the year-of-service identifier:

Single-Digit Grade ID	(GRADE)
Two-Digit Primary Specialty ID	(SPFC(1))
Two-Digit Secondary Specialty ID	(SPEC(I), I=2..11)
Four-Digit Population Amount	(INPUT(I), I=1..10)

2.2.8.2. RECORD DESCRIPTION

The number of records per primary specialty is limited to the number of additional specialties listed for that primary specialty. The maximum per record is ten. The following is a description of a variant number of additional specialties:

GRADE	COLUMN 2
SPEC(1)	COLUMNS 4 - 5
SPEC(2)	COLUMNS 7 - 8
INPUT(1)	COLUMNS 9 - 12
SPEC(3)	COLUMNS 14 - 15
INPUT(2)	COLUMNS 16 - 19
:	:
:	:

2.2.8.3. INPUT ROUTINE

AGEBGP reads the THS file at two points during program execution - (1) SUBROUTINE ACCESS, and (2) the main program. In both cases the SUBROUTINE INVNTG is used as the input routine.

2.2.9. PRESET ACCESSION LEVELS (PRESETS)

2.2.9.1. FILE DESCRIPTION

The PRESETS file contains by two-digit specialty code the desired number of 2d LT accessions. By using this file all previous accession calculations are disregarded with the exception of those specialties not preset by this file. The data images in this file are :

Two-Digit Specialty Code ID Preset Accession Level	(ISP) (IADJ)
---	-----------------

2.2.9.2. RECORD DESCRIPTION

This file can contain from one to all the specialty codes used; thus, the number of records associated with this file can vary. Each record is read into AGEBGPR using a blank format; hence, the adjustment field (IADJ) can vary in size. The data format is :

ISP	COLUMNS 1 - 2
comma	COLUMN 3
IADJ	COLUMNS 4 -

2.2.9.3. INPUT ROUTINE

The PRESETS file enters AGEBGPR via the SUBROUTINE ACCESS. If the user wishes not to preset the accession levels then replace the @ADD card with an @EOF card.

2.2.10. UTILIZATION RATES (URATES)

2.2.10.1. FILE DESCRIPTION

The URATES file contains by two-digit specialty the target MAJ utilization of those specialties where a specific fixed point operating level is desired. The data images involved are :

Two-Digit Specialty Code ID	(ISPEC)
Three-Digit Fixed Point Operating Level	(X)
(includes decimal point)	

2.2.10.2. RECORD DESCRIPTION

The URATES file is read into AGEBGPR using a blank format; thus, field lengths can vary. An example data format :

ISPEC	COLUMNS 1 - 2
comma	COLUMN 3
X	COLUMNS 4 - 6

2.2.10.3. INPUT ROUTINE

The SUBROUTINE FAR inputs the URATES file into AGEBGPR. Only those specialties listed in the file will have a fixed point operating level, all other specialties will have their operating levels calculated using a sum of squares minimization technique.

2.2.11. SPECIALTY CODES NO DESIGNATION (NODESIG)

2.2.11.1. FILE DESCRIPTION

The NODESIG file contains by two-digit specialty a list of those specialties which policy precludes from receiving ADSPEC designations. The data image is :

Two-Digit Specialty Code ID	(ISPEC)
-----------------------------	---------

2.2.11.2. RECORD DESCRIPTION

The NODESIG file can contain any number of specialties up to the total number of specialties used; hence, the number of records can vary. Each record has the following data format :

ISPEC	COLUMNS 1 - 2
-------	---------------

2.2.11.3. INPUT ROUTINE

The NODESIG file enters AGEBUGPR via the SUBROUTINE ADSPEC. This file is read prior to any ADSPEC calculations. If the user wishes not to restrict the ADSPEC-ing process then the END card should be replaced with an EOF card.

2.2.12. PROPOSER PREFERENCE MATRIX (PREF-MAT)

2.2.12.1. FILE DESCRIPTION

The PREF-MAT file contains by two-digit specialty code the proponent preferences for additional specialty designations using a minimum and maximum range of percentages. The data images involved in producing this matrix are :

Two-Digit Primary Specialty ID	(IE)
Two-Digit Secondary Specialty ID	(IC)
One to Three-Digit Integer Percentage	(D)
Single-Digit Type Width Flag	(ITYPE)

2.2.12.2. RECORD DESCRIPTION

The number of records involved are based on the total number of INSPEC/ADSPEC combinations. Each record has the following format :

IS	COLUMNS 1 - 2
comma	COLUMN 3
IC	COLUMNS 4 - 5
comma	COLUMNS 6
D	COLUMNS 7,7 - 8, or 7 - 9
comma	COLUMNS 8,9, or 11
ITYPE	COLUMNS 9,10, or 11

2.2.12.3. INPUT ROUTINE

The proponent preference matrix is read into AGEBGPP via the SUBROUTINE ADSPEC. It is used in conjunction with the RANGE WIDTH (see MISCELLANEOUS INPUTS section 2.2.13) and the type width flag (ITYPE) to produce the minimum and maximum range of percentages.

2.2.13. MISCELLANEOUS INPUTS

Refer to section 3 for more information concerning the following inputs.

2.2.13.1. CURRENT AND PROJECTION YEARS (NOWYR,PROJYR)

The current and projection years are read into the AGEBGPR MODEL by the main program. These parameters are two-digit integers separated by a comma. The difference of these two parameters sets the number of times AGEBGPR will cycle or 'age' the force.

2.2.13.2. OMF SOURCE DATE (OMF)

The OMF source date is read into AGEBGPR by the main program from the runstream. It is placed into the runstream as a five-character string consisting of a three-character month and a two-character year.

2.2.13.3. FAR LIMITS (RATELO,RATEHI)

The FAR LIMITS for MAJ, LTC, and COL are read by AGEBGPR from the runstream by the main program. These parameters consist of six real values, alternating low and high limits, which are separated by commas.

2.2.13.4. ADSPEC YEAR GROUP (IYGTBD)

The ADSPEC YEAR GROUP, usually eight, is read by AGEBGPR by the main program from the same line as the FAR LIMITS. This integer parameter sets the year group which will receive ADSPEC designations.

2.2.13.5. CONSTRAINED NEW 2d LT NUMBER (NUM)

This parameter limits the total number of accessions calculated by the SUBROUTINE ACCESS. It is an integer value read by that subroutine from the runstream.

2.2.13.6. RECALLS (J,NUM)

The RECALL parameters consist of a year-of-service identifier and a population amount separated by a comma. These parameters are read by the main program from the runstream and added to the year group's inventory.

2.2.13.7. SINGLE TRACK ELEMENTS (ISPEC,XX)

Single track elements consist of a two-digit specialty code and a percentage. These parameters are read into AGEBGPR by the SUBROUTINE ADSPEC from the runstream. They control the percentage of a specialty that will not receive additional specialties.

2.2.13.9. PREFERENCE RANGE WIDTH (WIDTH)

This real parameter is a percentage which will be used to compute upper and lower limits for the proponent preference matrix (see section 2.2.12). It is read into AGEPGPR by the SUBROUTINE ADSPEC from the runstream.

3. RUNSTREAM

The following runstream is used to merge the preprocessors, WOSM, and the AGE/GPR MODEL together as one entity. The example shown is for a single-year execution which 'ages' the thirty-year groups one year, calculates a new accession year group, and ADSPECs the new eighth year group. In order to 'age' the force more than one year, several new runstream lines must be added and a block of existing lines must be dittoed.

```

@ASG,T 4.,///500 : ACCESSION/DESIGNATION SUMMARY OUTPUT FILE
@ASG,T 8.,///500 : NEXT FY INVENTORY BY SC PAIR,YOS,GRADE OUTPUT
@ASG,T 0.,///500 : FILF
@ASG,T 10.,///500 : INPUT FILE FOR CREATE 24, OUTPUT FILE FOR WOSM
@ASE,T 12.: : OUTPUT FILE FOR CREATE 12, INPUT FILE FOR WOSM
@ASG,T 25.: : WOSM INPUT FILE - DTSPC INVENTORY FILE
@ASG,T 26.: : WOSM INPUT FILE - PERSACS AUTH FILE
@ASG,T 29.,///500 : INVENTORY FOR START FY TO END FY BY SC, GRADE
@ASG,T 29.: : OUTPUT

:ED PERSACS AUTH FILE,10.      . CREATE FILE 10 INPUT FILE
EXIT
:ED DTSPC FILE,25.           . CREATE FILE 25 INPUT FILE
EXIT
@XQT AUTH FILE PREPROCESSOR . CREATE FILE 26 INPUT FILE
@XQT DESIG FILE PREPROCESSOR . CREATE FILE 12 INPUT FILE
@ADD,E DESIG FILE           . INSPEC/ADSPEC INVENTORY
@ERS 10.                     . PREPARE 10 FOR WOSM OUTPUT
@XQT,OPTIONS WOSM MODEL    . EXECUTE THE MODEL
@ADD,E SPECS FILE           . SPECIALTY CODES
@ADD,E CASREP FILE          . CASUALTY REPLACEMENT RATES
@ERS 12,10,48                 . TOUR LENGTHS (SHORT, LONG, CONUS)
@ERS 12,10,48                 . TOTAL FEMALE AUTH CONSTRAINT
@ERS 12,10,48                 . PREFERRED DISTRIBUTION
@ERS 12,10,48                 . WOSM OUTPUT FILE
@ERS 10.                      . ERASE TEMPORARY FILE 10
@ERS 12.                      . ERASE TEMPORARY FILE 12
@ERS 25.                      . ERASE TEMPORARY FILE 25
@ERS 26.                      . ERASE TEMPORARY FILE 26
@ERS 27.                      . ERASE TEMPORARY FILE 27
@ERS 28.                      . ERASE TEMPORARY FILE 28
@ERS 29.                      . ERASE TEMPORARY FILE 29
@XQT AGE/GPR MODEL          . EXECUTE THE MODEL
@ADD,E SPECS FILE            . SPECIALTY CODES
@ERS 1,2,3,4                   . BEGINNING AND ENDING YEARS
@SFPP 3                       . BEGINNING INV SOURCE DATE
@SFPP 3                       . MAJ, LTC, COL FAR LIMITS, AND
@SFPP 3                       . ADSPEC YRGP
@ADD,E INV-YG-GR FILE         . INSPEC/ADSPEC INVENTORY
@ADD,E CRATES FILE           . CONTINUATION RATES BY SPC
@ADD OVERALL CRATES          . OPWD CONTINUATION RATES
@ADD GRADE DIST FILE         . GRADE DISTRIBUTION
@EOF END OF REDESIGNATION DATA (USUALLY INTO SC 15 & 71)
@ADD,E FEMALE AUTH FILE      . WOSM OUTPUT FILE
@ADD,E THS FILE               . THS INVENTORY
@COOC CONSTRAINED NEW ?LT ACCESSION NUMBER
@EOF PRESSET ACCESSION LEVELS
@EOF END OF RECALL DATA
@ADD,E FEMALE AUTH FILE      . WOSM OUTPUT FILE
@ADD,E THS FILE               . THS INVENTORY
@ADD,E URATES FILE           . ENTER PREFSET MAJ URATES HERE (OPTIONAL)
@ADD,E NODESIG FILE           . SPCS NOT DESIGNATED FOR ADSPEC
@EOF ENTER SINGLE TRACK ELEMENT HERE
@20, PREFERENCE RANGE WIDTH
@ADD,E PREF-MAT FILE          . PROPOUNTER PREFERENCE MATRIX

```

3.1. TEMPORARY MASS STORAGE ASSIGNMENT

This section of the runstream sets aside temporary mass storage to be used by both models:

```

@ASG,T 4.0.///500 . ACCESSION/DESIGNATION SUMMARY OUTPUT FILE
@ASG,T 9.0.///500 . NEXT FY INVENTORY BY SC PAIR,YOS,GRADE OUTPUT
@ASG,T 10.0.///500 . FILE
@ASG,T 9.0.///500 . NEXT FY INVENTORY BY SC PAIR,GRADE OUTPUT FILE
@ASG,T 10.0.///500 . INPUT FILE FOR CREATE 26, OUTPUT FILE FOR WOSM
@ASG,T 12. . OUTPUT FILE FOR CREATE 12, INPUT FILE FOR WOSM
@ASG,T 25. . WOSM INPUT FILE - DTSPEC INVENTORY FILE
@ASG,T 26. . WOSM INPUT FILE - PERSACS AUTH FILE
@ASG,T 29.0.///500 . INVENTORY FOR START FY TO END FY BY SC,GRADE
@ASG,T 29.0.///500 . OUTPUT

```

The example shown is for a single year run of AGEBSGPR. For multiple year runs three additional temporary files must be assigned for each year of execution; thus, each year needs three separate files to store the output information:

```

84 -----> FILES 8, 9, 10
85 -----> FILES 11, 12, 13
86 -----> FILES 14, 15, 16
      .
      :
      :

```

The output files are defined as :

```

FILES 8,11,14... New FY inventory by year group, grade
and specialty pair
FILES 9,12,15... New FY inventory by grade and specialty
pair
FILES 10,13,16.. New accessions/ADSPECS for the 8th year
group

```

FILE 4 contains the accessions/ADSPECS information for the span of years designated by the beginning/ending years, and FILE 29 contains inventory information for that span of years.

3.2. PREPROCESSOR SECTION

The following section prepares the logical units 10,12,25 and 26 for input into WOSM :

```

@ED PERSACS AUTH FILE,10. . CREATE FILE 10 INPUT FILE
@EXIT
@ED DTSPEC FILE,25. . CREATE FILE 25 INPUT FILE
@EXIT
@XQT AUTH FILE PREPROCESSOR . CRATE FILE 26 INPUT FILE
@XQT DESIG FILE PREPROCESSOR . CREATE FILE 12 INPUT FILE
@ADD,E DESIG FILE . INSPEC/ADSPEC INVENTORY
@ERS 10. . PPREPARE 10 FOR WOSM OUTPUT

```

FILE 10 contains the PERSACS information which is input into the AUTH FILE preprocessor. FILE 12 contains the DESIG FILE information output from the DESIG FILE preprocessor. FILE 25 contains the DTSPEC FILE information, and FILE 26 contains the output information from the AUTH FILE preprocessor. After pre processing is complete FILE 10 is erased.

3.3. WOSM EXECUTION SECTION

This section executes WOSM and adds the appropriate data files and runstream information :

EXQT,OPTIONS WOSM	• EXECUTE THE MODEL
&ADD,E SPECS FILE	• SPECIALTY CODES
&ADD,E CASREP FILE	• CASUALTY REPLACEMENT RATES
12 30 49	• TOUR LENGTHS (SHORT, LONG, CONUS)
&56C	• TOTAL FEMALE AUTH CONSTRAINT
&ADD,E PREDIS FILE	• PREFERRED DISTRIBUTION

See section 3 for more information concerning this part of the runstream.

3.4. MERGE SECTION

This section prepares the temporary files for use by the AGEBGPR MODEL :

©,I 10.,FEMALE AUTH FILE	• WOSM OUTPUT FILE
&ERS 10.	• ERASE TEMPORARY FILE 10
&ERS 12.	• ERASE TEMPORARY FILE 12
&ERS 25.	• ERASE TEMPORARY FILE 25
&ERS 26.	• ERASE TEMPORARY FILE 26
&ERS 27.	• ERASE TEMPORARY FILE 27
&ERS 28.	• ERASE TEMPORARY FILE 28
&ERS 29.	• ERASE TEMPORARY FILE 29

FILE 10, which contains the female officer authorizations, is copied to a permanent file and files 10,12,25,26,27,28, and 29 are erased.

3.5. AGEBGPR EXECUTION SECTION

This section runs AGEBGPR for the specified number of years. The example shown is for a single year run :

EXQT AGEBGPR MODEL	• EXECUTE THE MODEL
&ADD,E SPECS FILE	• SPECIALTY CODES
E3,4	• BEGINNING AND ENDING YEARS
SEPP3	• BEGINNING INVT OMF SOURCE DATE
.333,.666,.333,.666,.333,.666,B,	• MAJ, LTC, CCL FAR LIMITS, AND ADSPEC YRSP
&ADD,E INV-YG-GR FILE	• INSPEC/ADSPEC INVENTORY
&ADD,E CRATES FILE	• CONTINUATION RATES BY SPC
&ADD OVERALL CRATES	• OPMD CONTINUATION RATES
&ADD GRADE DIST FILE	• GRADE DISTRIBUTION
&EOF END OF REDESIGNATION DATA (USUALLY INTO SC 15 8 71)	
&ADD,E FEMALE AUTH FILE	• WOSM OUTPUT FILE
&ADD,E THS FILE	• THS INVENTORY
C000	CONstrained NEW ZLT ACCESSION NUMBER
&EOF PRESET ACCESSION LEVELS	
&EOF END OF RECALL DATA	
&ADD,E FEMALE AUTH FILE	• WOSM OUTPUT FILE
&ADD,E THS FILE	• THS INVENTORY
&ADD,E URATES FILE	• ENTER PRESET MAJ URATES HERE (OPTIONAL)
&ADD,E NODESIG FILE	• SPCs NOT DESIGNATED FOR ADSPEC
&EOF ENTER SINGLE TRACK ELEMENT HERE	
.20, PREFERENCE RANGE WIDTH	
&ADD,E PREF-MAT FILE	• PROPOSER PREFERENCE MATRIX

In order to run AGEBGPR for more than one year the block of lines following the INSPEC/ADSPEC inventory &ADD card must be repeated for each year of execution.

4. RUN OPTIONS

This section deals with the options available to the OASYS user, primarily the WOSM execution options. Run options are placed on the WOSM EXQT card following execute statement :

EXQT,options #WOSM.MODEL
options are : C,F,I,M,P,R,X,Y,Z

4.1. C - OPTION

The 'C' option sets WOSM into constrained mode. The presence of this option dictates that a FEMALE CONSTRAINT NUMBER should be included in the runstream (see section 3). The default mode for WOSM is unconstrained. Leave off the 'C' option to run WOSM in unconstrained mode.

4.2. F - OPTION

The 'F' option signifies that this is a PREFERRED DISTRIBUTION run. WOSM will execute the PRFDIS routine which reads in the PRFDIS file (see section 3) from the runstream. The default mode will not read in the PRDIS file.

4.3. I - OPTION

The 'I' option instructs WOSM to read in the DESIG file. If this option is used then the DESIG file @ADD card should be included in the runstream (see section 3). The default mode is that the DESIG file will not be read into WOSM.

4.4. M - OPTION

The 'M' option causes WOSM to print an extra report - the ROTATION EQUITY report. This report can be used to investigate problem specialties with respect to the rotation structure. The default mode is that this report will not be printed.

4.5. P - OPTION

The 'P' option turns on the OMF COMPARE PRINT switch. If this option is used then an extra report will be printed which shows all specialties not included in the WOSM processing and the reasons why they were not included. The default mode is that this report will not be printed.

4.6. R - OPTION

This option controls the formatting of the female officer authorizations output file. If this option is used then the output file will be formatted for use by the AGERGPR MODEL. If the default mode is used then the output file will be formatted for use by the YOS MODEL.

4.7. X,Y,Z - OPTIONS

Only one of these options should be used by WOSM. These options instruct WOSM as to which casualty replacement rate should be input into the model. The following defines their actions:

X - D+30 CASUALTY REPLACEMENT RATES
Y - D+60 CASUALTY REPLACEMENT RATES
Z - D+90 CASUALTY REPLACEMENT RATES

The default mode is that WOSM will not use casualty replacements during this run.

•
•
5. WOSM CODE

The following ASCII FORTRAN CODE listing is the complete WOSM model as modified by the Concepts Analysis Agency. The source code is heavily commented and should be easily read by any FORTRAN programer. This Listing was prepared using the SCIENCE APPLICATIONS, INC. SOFTWARE DESIGN AND DOCUMENTATION LANGUAGE (SAI-SDDL). References to SPERRY system routines include the SPERRY manual title and number.

PAGE

LINE

ASCII FORTRAN CODE LISTING

PAGE 34

```
35      1      PROGRAM MAIN
40    317      SUBROUTINE FILER (S)
47    735      SUBROUTINE READR (S)
48    755      SUBROUTINE MAXRPT (S)
50   876      SUBROUTINE FRPT (S)
50   913      ENTRY TITLE
51   996      ENTRY TOTLE
53  1098      ENTRY GRAND
54  1136      SUBROUTINE DATA (S)
56  1241      SUBROUTINE SUMR (S)
58  1316      SUBROUTINE DIST (S)
60  1448      SUBROUTINE CMFT (S)
63  1617      SUBROUTINE TPER
64  1664      SUBROUTINE SPCONV (IARG,A,NN)
65  1714      SUBROUTINE ROTREP(S)
67  1840      SUBROUTINE LEGEND
68  1869      SUBROUTINE PREDIS(S)
70  1965      SUBROUTINE OPT(NOPT)
71  2007      SUBROUTINE FACSF (ARG)
72  2030      SUBROUTINE ADATE (DATE,TIME)

73      MODULE INVOCATION TREE
74      CROSS REFERENCE -- MODULE
```

PROGRAM MAIN

DEPARTMENT OF THE ARMY
UNITED STATES ARMY CONCEPTS ANALYSIS AGENCY
FORCE SYSTEMS DIRECTORATE
PERSONNEL SYSTEMS ANALYSIS DIVISION

OFFICER ASSIGNMENT SYSTEM STUDY
ORIGINAL SOURCE CODE : MILPERCEN WOMEN'S OFFICER STRENGTH MODEL
EXTRactions, CONVERSIONS AND MODIFICATIONS
BY
R.M.MALAY OCT 1987

R.M. MALAY OCT 1987

```

PARAMETER MAXCMF=40
REAL RATIO,TOTFIL(MAXCMF),TOTACC(MAXCMF),CASRAT(MAXCMF,26),PCAS,
TTHSPC,TOTPCT(MAXCMF)
INTEGER AVAIL/C/,AVAIL1/C/,AVAIL2/C/,CBTCNS(5),CBTLNG(5),
CBTSHT(6),CWFSTAR(MAXCMF),CWT(5),CNTL,COMBAT(5),NOPT,J,THSREQ(5),
CONTNT(5),CONUS(6),CTAADS(6),FLAG,GTO(1C),IPAGE,VONACC(MAXCMF),
KEEP,LONG(5),LTAADS(6),MALE(5),FEMACC(6),LTLSTL,RFLAG(CRAT),
NNOS,NONCOM(5),CASREP(5),CARPO(5),PROP,RET/C/,POTRF(5),SHORT(4),
MMOS,STAADS(6),STRTH(6),SUM/O/,TAADS(6),MAXCL,MAXGRO/E/,THSFAC,
TOP,TOTAL(11),TOTCMF(MAXCMF),TOTCNT(MAXCMF),TOTATH(MAXCMF),
INVENT(5,MAXCMF),JINVENT(5),ISPEC(MAXCMF),TOTMLE(MAXCMF),
TOTINV(MAXCMF),ICMF,I,NUM,JCMF,NUMCMF,TOTTHS(MAXCMF),
TOTINT(MAXCMF),TOTSAS(MAXCMF),IFILE
CHARACTER GRD*3,MOS*3,NOS*2,PRTON*1,DATE*5,NACC*1,TIME*8,
RTABLE(7)*29,RTAB*28,F133(16)*4,NACCFG(MAXCMF)*1,F27*12,F29*12,
FRAT(5)*4,MAX63(5)*1
EQUIVALENCE (NNOS,NOS),(MMOS,MOS)
DATA GRD/LT,'CPT','MAJ','LTC','COL'/
DATA RTABLE/*          FULL REPORT           */
      /' DISTRIBUTION SUMMARY           '/
      /' FEMALE STRTH TOTALS BY SPC   '/
      /' LT-CPT FEM STRTH TOTS BY SPC '/
      /' LT FEMALE STRTH TOTS BY SPC '/
      /' FEMALE STRTH TOTS BY GRADE '/
      /' ROTATION EQUITY REPORT      '/

DATA F27 /*@ASG,T 27 : */
DATA F29 /*@ASG,T 29 : */

*****+
* FORMAT STATEMENT FOR THE WRITE STATEMENT FOLLOWING PRINT 13R IN *
* THIS SUBROUTING (MFTC1). THIS FORMAT IS CHANGED DURING RUN TIME *

```

```

1      DATA (F138(I), I=1,16) /4H(40,4HT16,4HA1,I,4H2,5C(4H4X,I,4H5)2,
2      4H(4X,,4HF5.1,4H),4X,4H,15,,4H3X,F,4H2.7,,4H4X,I,4H2,5X,4H,15,,4H/
3      ) )

```

```

63 C
64 C THE FOLLOWING DATA STATEMENT ALLOWS DYNAMIC MODIFICATION OF THE
65 C FORMAT STATEMENT FOR THE CASUALTY REPLACEMENT RATES READ
66 C STATEMENT.
67 C
68 C
69 C
70 C
71 C DATA (FRAT(I),I=1,5) /4H(I2,,4H1X,A,4H3,10,4HX,16,4H.3) /
72 C
73 C
74 C
75 C   N      N      00000      TTTTTTTT    EEEEEEEE    ::    +
76 C   NN     N      0       0       T       E       ::    +
77 C   N      N      0       0       T       E       ::    +
78 C   N      N      0       0       T       EEEEEE    +
79 C   N      NN     0       0       T       E       ::    +
80 C   N      N      00000      T       EEEFEEE    ::    +
81 C
82 C
83 C
84 C THIS PROGRAM USES THE FOLLOWING RUN OPTIONS:
85 C
86 C P -----> DMF COMPARE PRINT ON/OFF (DEFAULT IS OFF)
87 C
88 C C -----> CONSTRAINED FLAG (DEFAULT IS UNCONSTRAINED)
89 C
90 C I -----> DESIG INVNT FILE 12 INPUT (DEFAULT NO READ)
91 C
92 C R -----> ROLL UP FILE 10 FOR INPUT TO AGEBUGPR (COL-LT,TOT)
93 C (DEFAULT IS BY SSI LT-COL)
94 C
95 C F -----> OPTIONAL PREFERRED DISTRIBUTION ROUTINE
96 C
97 C M -----> OPTIONAL ROTATION EQUITY REPORT (DEFAULT NO REPORT)
98 C
99 C X,Y,Z -----> SPECIFIES D+30,D+60,D+90 CASUALTY REPLACEMENT
100 C RATES TO BE APPLIED, RESPECTIVELY.
101 C (DEFAULT - NO CASREP SET ASIDE)
102 C
103 C
104 C FORMAT : BXQT,OPTIONS ABSOLUTE.ELEMENT
105 C
106 C
107 C
108 C
109 C *****
110 C *
111 C *          MAIN DRIVER
112 C *
113 C *****
114 C
115 C
116 C
117 C
118 C
119 C
120 9999 CNTL=2
121 PRTON='N'
122 RFLAG=0
123 CRAT=-1
124 IFILE=27
125 C

```

```

126 C
127 C
128 C
129 C
130 C
131 C
132 C
133 C
134 C
135 C
136 C
137 C
138 C
139 C
140 C
141 C
142 C
143 C
144 C
145 C
146 C
147 C
148 C
149 C
150 C
151 C
152 C
153 C
154 C
155 C
156 C
157 C
158 C
159 C
160 C
161 C
162 C
163 C
164 C
165 C
166 C
167 C
168 C
169 C
170 C
171 C
172 C
173 C
174 C
175 C
176 C
177 C
178 C
179 C
180 C
181 C
182 C
183 C
184 C
185 C
186 C
187 C
188 C
189 C
190 C
191 C

```

*----->(70)

♦ GET C OPTION - THIS OPTION SETS THE CONSTRAINED FLAG

♦

♦ CALL OPT(NOPT) A RETRIEVE OPTION WORD-----

IF(BITS(NOPT,13,1).EQ.1) THEN

CNTL=1

ENDIF

♦

♦ GET I OPTION - TRIGGERS THE INPUT OF THE FEM DESIG FILE

♦

♦ IF(BITS(NOPT,19,1).EQ.1) THEN

J=0

J=J+1

READ(12,21,END=2) ISPEC(J),(INVENT(I,J),I=1,5)

GO TO 1

PRINT 20,J-1

ENDIF

♦

♦ GET P OPTION - TURNS ON OMF COMPARE PRINT SWITCH

♦

♦ IF(BITS(NOPT,25,1).EQ.1) THEN

PRTON='Y'

ENDIF

♦

♦ GET R OPTION - CONTROLS FILE 10 OUTPUT FORMAT

♦

♦ IF(BITS(NOPT,26,1).EQ.1) THEN

RFLAG=1

ENDIF

♦

♦ READ IN SPECS FILE - CONTAINS VALID SPECIALTY CODE IDS

♦

♦

J=0

J=J+1

READ(5,19,END=4) CMFTAB(J),NONACC(J)

GO TO 3

NUMCMF=J-1

♦

♦ THE NUMBER OF SPCs READ IN CONTROLS THE NUMBER OF SPCs

♦ OUTPUT IN THE CMFT SUBROUTINE.

♦

♦ ENCODE(4,15,F138(1)), NUMCMF

#WRITE(6,24) NUMCMF

```

192 C
193 C
194 C
195 C      + CHECK IF D+30 OR D+60 OR D+90 CASUALTY RATES SHOULD BE APPLIED +
196 C      + OPTION = X OR Y OR Z (USE ONLY ONE!!) +
197 C
198 C
199 C
200 C      ++++++
201 C      IF(BITS(NOPT,34,1).EQ.1) THEN          @ OPTION X
202 C      CRAT=0
203 C      ENDIF
204 C      IF(BITS(NOPT,35,1).EQ.1) THEN          @ OPTION Y
205 C      CRAT=2
206 C      ENDIF
207 C      IF(BITS(NOPT,36,1).EQ.1) THEN          @ OPTION Z
208 C      CRAT=4
209 C      ENDIF
210 C      IF(CRAT.GE.0) THEN
211 C          CRAT=CRAT*5+4
212 C
213 C
214 C      + THE VARIABLE CRAT CONTROLS THE FIELD TO BE READ IN THE
215 C      + CASUALTY RATE FILE. SPCONV RETURNS THE SPC'S INDEX AND
216 C      + THE ICHAR FUNCTION RETURNS THE SSI INDEX. THE CASUALTY
217 C      + RATE IS STORED IN THE ARRAY BY SC,SSI INDICES.
218 C      + EXAMPLE: SPC 11, SSI 11A WOULD BE STORED IN
219 C          CASRAT(1,1) AND SPC 11, SSI 11B WOULD
220 C          BE STORED IN CASRAT(1,2).
221 C
222 C
223 C
224 C      ENCODE(4,16,FRAT(3)) CRAT
225 C      J=0
226 C      J=J+1
227 C      READ(5,FRAT,END=6) ICMF,MOS,RCAS
228 C      CALL SPCONV(ICMF,CMFTAB,NUM(MF)) @-----> ( 64)
229 C      I=(ICHAR(MOS(3:3))-ICHAR('A'))+1
230 C      CASRAT(ICMF,I)=RCAS
231 C      GO TO 5
232 C
233 C      IF(J.GT.0) THEN
234 C          WRITE(6,23) J-1
235 C      ENDIF
236 C
237 C
238 C      + ASSIGN WORKING FILES 27 AND 29
239 C
240 C
241 C
242 C
243 C      CALL FACS(F27) @-----> ( 71)
244 C      CALL FACS(F29) @-----> ( 71)
245 C      WRITE(6,25)
246 C
247 C
248 C
249 C      + READ IN THE SHORT, LONG, AND MAXIMUM TOUR LENGTHS ALLOWED
250 C      + CALL FILER ROUTINE TO DO COMPUTATIONS AND CALL REPORT
251 C      + GENERATORS. ROTATION EQUITY REPORT IS OPTIONAL.
252 C
253 C
254 C
255 C
256 C
257 C      READ (5,22) STL,LTL,MAXCL
258 C      FLAG=CNTR

```

```

253    CALL FILEF ($7)      5 DO COMPUTATIONS----->( 40)
259    7       RTAB=RTABLE(1)   6 FULL REPORT----->( 50)
260    CALL FRPT ($8)      7 DISTRIBUTION SUMMARY----->( 58)
261    8       RTAB=RTABLE(2)
262    CALL DIST ($9)      8 FEMACC TOTALS BY SPC----->( 60)
263    9       RTAB=RTABLE(3)
264    CALL CMFT ($10)     9 LT-CPT FEMACC TOTALS BY SPC----->( 60)
265    10      MAXGRD=2
266    RTAB=RTABLE(4)      10 FEMACC TOTALS BY GRADE----->( 48)
267    CALL CMFT ($11)     11 RTAB=RTABLE(5)
268    11      MAXGRD=1
269    CALL CMFT ($12)     12 RTAB=RTABLE(6)
270    12      CALL MAXRPT ($13) 13 RTAB=RTABLE(7)
271    13      IF(BITS(NOPT,23,1),EQ.1) THEN
272    14          CALL ROTREP($14) 14 & ROTATION REPORT----->( 65)
273    ENDIF
274    15      IF(BITS(NOPT,16,1),EQ.1) THEN
275    16          CALL PREDIS($9998) 16 & PREF DIST ROUTINE----->( 68)
276    ENDIF
277    9998      STOP
278
279
280
281
282
283
284    15      FORMAT ('{',I2,'}')
285    16      FORMAT (' ',I2)
286    17      FORMAT ()
287    18      FORMAT (' ','FEM-DESIG INVENTORY FILE 12 INPUT ',I3,' RECORDS')
288    19      FORMAT (I2,1X,0I5)
289    20      FORMAT (I2,1X,I2,I2,1X,I2)
290    21      FORMAT (' ','CASUALTY REPLACEMENT RATE FILE INPUT ',I7,' RECORDS')
291    22      FORMAT (' ',' ','SPECIALTY CODE FILE INPUT ',I3,' RECORDS')
292    23      FORMAT (' ',' ','OUTPUT FILES ARE: /',I1,1X,'FILE 10 - FEMALE AUTH BY
293    24      GRADE & SPC /',I1,1X,'FILE 27 - WORKING STORAGE FILE /',I1,1X,'FILE
294    25      I2 29 - NEXT YEAR FEMALE CONTENT BY GRADE & SSI (INCLUDES ACC)') 2
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313      **** FTN DEBUG ROUTINE ****
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
8010
8011
8012
8013
8014
8015
8016
8017
8018
8019
8020
8021
8022
8023
8024
8025
8026
8027
8028
8029
8030
8031
8032
8033
8034
8035
8036
8037
8038
8039
8040
8041
8042
8043
8044
8045
8046
8047
8048
8049
8050
8051
8052
8053
8054
8055
8056
8057
8058
8059
8060
8061
8062
8063
8064
8065
8066
8067
8068
8069
8070
8071
8072
8073
8074
8075
8076
8077
8078
8079
8080
8081
8082
8083
8084
8085
8086
8087
8088
8089
8090
8091
8092
8093
8094
8095
8096
8097
8098
8099
80100
80101
80102
80103
80104
80105
80106
80107
80108
80109
80110
80111
80112
80113
80114
80115
80116
80117
80118
80119
80120
80121
80122
80123
80124
80125
80126
80127
80128
80129
80130
80131
80132
80133
80134
80135
80136
80137
80138
80139
80140
80141
80142
80143
80144
80145
80146
80147
80148
80149
80150
80151
80152
80153
80154
80155
80156
80157
80158
80159
80160
80161
80162
80163
80164
80165
80166
80167
80168
80169
80170
80171
80172
80173
80174
80175
80176
80177
80178
80179
80180
80181
80182
80183
80184
80185
80186
80187
80188
80189
80190
80191
80192
80193
80194
80195
80196
80197
80198
80199
80200
80201
80202
80203
80204
80205
80206
80207
80208
80209
80210
80211
80212
80213
80214
80215
80216
80217
80218
80219
80220
80221
80222
80223
80224
80225
80226
80227
80228
80229
80220
80221
80222
80223
80224
80225
80226
80227
80228
80229
80230
80231
80232
80233
80234
80235
80236
80237
80238
80239
80230
80231
80232
80233
80234
80235
80236
80237
80238
80239
80240
80241
80242
80243
80244
80245
80246
80247
80248
80249
80240
80241
80242
80243
80244
80245
80246
80247
80248
80249
80250
80251
80252
80253
80254
80255
80256
80257
80258
80259
80250
80251
80252
80253
80254
80255
80256
80257
80258
80259
80260
80261
80262
80263
80264
80265
80266
80267
80268
80269
80260
80261
80262
80263
80264
80265
80266
80267
80268
80269
80270
80271
80272
80273
80274
80275
80276
80277
80278
80279
80280
80281
80282
80283
80284
80285
80286
80287
80288
80289
80280
80281
80282
80283
80284
80285
80286
80287
80288
80289
80290
80291
80292
80293
80294
80295
80296
80297
80298
80299
80290
80291
80292
80293
80294
80295
80296
80297
80298
80299
80300
80301
80302
80303
80304
80305
80306
80307
80308
80309
80300
80301
80302
80303
80304
80305
80306
80307
80308
80309
80310
80311
80312
80313
80314
80315
80316
80317
80318
80319
80310
80311
80312
80313
80314
80315
80316
80317
80318
80319
80320
80321
80322
80323
80324
80325
80326
80327
80328
80329
80320
80321
80322
80323
80324
80325
80326
80327
80328
80329
80330
80331
80332
80333
80334
80335
80336
80337
80338
80339
80330
80331
80332
80333
80334
80335
80336
80337
80338
80339
80340
80341
80342
80343
80344
80345
80346
80347
80348
80349
80340
80341
80342
80343
80344
80345
80346
80347
80348
80349
80350
80351
80352
80353
80354
80355
80356
80357
80358
80359
80350
80351
80352
80353
80354
80355
80356
80357
80358
80359
80360
80361
80362
80363
80364
80365
80366
80367
80368
80369
80360
80361
80362
80363
80364
80365
80366
80367
80368
80369
80370
80371
80372
80373
80374
80375
80376
80377
80378
80379
80370
80371
80372
80373
80374
80375
80376
80377
80378
80379
80380
80381
80382
80383
80384
80385
80386
80387
80388
80389
80380
80381
80382
80383
80384
80385
80386
80387
80388
80389
80390
80391
80392
80393
80394
80395
80396
80397
80398
80399
80390
80391
80392
80393
80394
80395
80396
80397
80398
80399
80400
80401
80402
80403
80404
80405
80406
80407
80408
80409
80400
80401
80402
80403
80404
80405
80406
80407
80408
80409
80410
80411
80412
80413
80414
80415
80416
80417
80418
80419
80420
80421
80422
80423
80424
80425
80426
80427
80428
80429
80430
80431
80432
80433
80434
80435
80436
80437
80438
80439
80440
80441
80442
80443
80444
80445
80446
80447
80448
80449
80450
80451
80452
80453
80454
80455
80456
80457
80458
80459
80460
80461
80462
80463
80464
80465
80466
80467
80468
80469
80470
80471
80472
80473
80474
80475
80476
80477
80478
80479
80480
80481
80482
80483
80484
80485
80486
80487
80488
80489
80490
80491
80492
80493
80494
80495
80496
80497
80498
80499
80500
80501
80502
80503
80504
80505
80506
80507
80508
80509
80510
80511
80512
80513
80514
80515
80516
80517
80518
80519
80520
80521
80522
80523
80524
80525
80526
80527
80528
80529
80530
80531
80532
80533
80534
80535
80536
80537
80538
80539
80540
80541
80542
80543
80544
80545
80546
80547
80548
80549
80550
80551
80552
80553
80554
80555
80556
80557
80558
80559
80560
80561
80562
80563
80564
80565
80566
80567
80568
80569
80570
80571
80572
80573
80574
80575
80576
80577
80578
80579
80580
80581
80582
80583
80584
80585
80586
80587
80588
80589
80590
80591
80592
80593
80594
80595
80596
80597
80598
80599
80600
80601
80602
80603
80604
80605
80606
80607
80608
80609
80610
80611
80612
80613
80614
80615
80616
80617
80618
80619
80620
80621
80622
80623
80624
80625
80626
80627
80628
80629
80630
80631
80632
80633
80634
80635
80636
80637
80638
80639
80640
80641
80642
80643
80644
80645
80646
80647
80648
80649
80650
80651
80652
80653
80654
80655
80656
80657
80658
80659
80660
80661
80662
80663
80664
80665
80666
80667
80668
80669
80670
80671
80672
80673
80674
80675
80676
80677
80678
80679
80680
80681
80682
80683
80684
80685
80686
80687
80688
80689
80690
80691
80692
80693
80694
80695
80696
80697
80698
80699
80700
80701
80702
80703
80704
80705
80706
80707
80708
80709
80710
80711
80712
80713
80714
80715
80716
80717
80718
80719
80720
80721
80722
80723
80724
80725
80726
80727
80728
80729
80730
80731
80732
80733
80734
80735
80736
80737
80738
80739
80740
80741
80742
80743
80744
80745
80746
80747
80748
80749
80750
80751
80752
80753
80754
80755
80756
80757
80758
80759
80760
80761
80762
80763
80764
80765
80766
80767
80768
80769
80770
80771
80772
80773
80774
80775
80776
80777
80778
80779
80780
80781
80782
80783
80784
80785
80786
80787
80788
80789
80790
80791
80792
80793
80794
80795
80796
80797
80798
80799
80800
80801
80802
80803
80804
80805
80806
80807
80808
80809
80810
80811
80812
80813
80814
80815
80816
80817
80818
80819
80820
80821
80822
80823
80824
80825
80826
80827
80828
80829
80830
80831
80832
80833
80834
80835
80836
80837
80838
80839
80840
80841
80842
80843
80844
80845
80846
80847
80848
80849
80850
80851
80852
80853
80854
80855
80856
80857
80858
80859
80860
80861
80862
80863
80864
80865
80866
80867
80868
80869
80870
80871
80872
80873
80874
80875
80876
80877
80878
80879
80880
80881
80882
80883
80884
80885
80886
80887
80888
80889
80890
80891
80892
80893
80894
80895
80896
80897
80898
80899
80900
80901
80902
80903
80904
80905
80906
80907
80908
80909
80910
80911
80912
80913
80914
80915
80916
80917
80918
80919
80920
80921
80922
80923
80924
80925
80926
80927
80928
80929
80930
80931
80932
80933
80934
80935
80936
80937
80938
80939
80940
80941
80942
80943
80944
80945
80946
80947
80948
80949
80950
80951
80952
80953
80954
80955
80956
80957
80958
80959
80960
80961
80962
80963
80964
80965
80966
80967
80968
80969
80970
80971
80972
80973
80974
80975
80976
80977
80978
80979
80980
80981
80982
80983
80984
80985
80986
80987
80988
80989
80990
80991
80992
80993
80994
80995
80996
80997
80998
80999
80100
80101
80102
80103
80104
80105
80106
80107
80108
80109
80110
80111
80112
80113
80114
80115
80116
80117
80118
80119
80120
80121
80122
80123
80124
80125
80126
80127
80128
80129
80130
80131
80132
80133
80134
80135
80136
80137
80138
80139
80140
80141
80142
80143
80144
80145
80146
80147
80148
80149
80150
80151
80152
80153
80154
80155
80156
80157
80158
80159
80160
80161
80162
80163
80164
80165
80166
80167
80168
80169
80170
80171
80172
80173
80174
80175
80176
80177
80178
80179
80180
80181
80182
80183
80184
80185
80186
80187
80188
80189
80190
80191
80192
80193
80194
80195
80196
80197
80198
80199
80200
80201
80202
80203
80204
80205
80206
80207
80208
80209
80200
80201
80202
80203
80204
80205
80206
80207
80208
80209
80210
80211
80212
80213
80214
80215
80216
80217
80218
80219
80220
80221
80222
80223
80224
80225
80226
80227
80228
80229
80220
80221
80222
80223
80224
80225
80226
80227
80228
80229
80230
80231
80232
80233
80234
80235
80236
80237
80238
80239
80230
80231
80232
80233
80234
80235
80236
80237
80238
80239
80240
80241
80242
80243
80244
80245
80246
80247
80248
80249
80240
80241
80242
80243
80244
80245
80246
80247
80248
80249
80250
80251
80252
80253
80254
80255
80256
80257
80258
80259
80250
80251
80252
80253
80254
80255
80256
80257
80258
80259
80260
80261
80262
80263
80264
80265
80266
80267
80268
80269
80260
80261
80262
80263
80264
80265
80266
80267
80268
80269
80270
8027
```

```

317 C
318 C
319 C
320 C
321 C
322 C
323 C
324 C
325 C
326 C
327 C
328 C
329 C
330 C
331 C
332 C
333 C
334 C
335 C
336 C
337 C
338 C
339 C
340 C
341 C
342 C
343 C
344 C
345 C
346 C
347 C
348 C
349 C
350 C
351 C
352 C
353 C
354 C
355 C
356 C
357 C
358 C
359 C
360 C
361 C
362 C
363 C
364 C
365 C
366 C
367 C
368 C
369 C
370 C
371 C
372 C
373 C
374 C
375 C
376 C
377 C
378 C
379 C
380 C
381 C
382 C
383 C
384 C
385 C
386 C
387 C
388 C
389 C
390 C
391 C
392 C
393 C
394 C
395 C
396 C
397 C
398 C
399 C
400 C
401 C
402 C
403 C
404 C
405 C
406 C
407 C
408 C
409 C
410 C
411 C
412 C
413 C
414 C
415 C
416 C
417 C
418 C
419 C
420 C
421 C
422 C
423 C
424 C
425 C
426 C
427 C
428 C
429 C
430 C
431 C
432 C
433 C
434 C
435 C
436 C
437 C
438 C
439 C
440 C
441 C
442 C
443 C
444 C
445 C
446 C
447 C
448 C
449 C
450 C
451 C
452 C
453 C
454 C
455 C
456 C
457 C
458 C
459 C
460 C
461 C
462 C
463 C
464 C
465 C
466 C
467 C
468 C
469 C
470 C
471 C
472 C
473 C
474 C
475 C
476 C
477 C
478 C
479 C
480 C
481 C
482 C
483 C
484 C
485 C
486 C
487 C
488 C
489 C
490 C
491 C
492 C
493 C
494 C
495 C
496 C
497 C
498 C
499 C
500 C
501 C
502 C
503 C
504 C
505 C
506 C
507 C
508 C
509 C
510 C
511 C
512 C
513 C
514 C
515 C
516 C
517 C
518 C
519 C
520 C
521 C
522 C
523 C
524 C
525 C
526 C
527 C
528 C
529 C
530 C
531 C
532 C
533 C
534 C
535 C
536 C
537 C
538 C
539 C
540 C
541 C
542 C
543 C
544 C
545 C
546 C
547 C
548 C
549 C
550 C
551 C
552 C
553 C
554 C
555 C
556 C
557 C
558 C
559 C
560 C
561 C
562 C
563 C
564 C
565 C
566 C
567 C
568 C
569 C
570 C
571 C
572 C
573 C
574 C
575 C
576 C
577 C
578 C
579 C
580 C
581 C
582 C
583 C
584 C
585 C
586 C
587 C
588 C
589 C
590 C
591 C
592 C
593 C
594 C
595 C
596 C
597 C
598 C
599 C
600 C
601 C
602 C
603 C
604 C
605 C
606 C
607 C
608 C
609 C
610 C
611 C
612 C
613 C
614 C
615 C
616 C
617 C
618 C
619 C
620 C
621 C
622 C
623 C
624 C
625 C
626 C
627 C
628 C
629 C
630 C
631 C
632 C
633 C
634 C
635 C
636 C
637 C
638 C
639 C
640 C
641 C
642 C
643 C
644 C
645 C
646 C
647 C
648 C
649 C
650 C
651 C
652 C
653 C
654 C
655 C
656 C
657 C
658 C
659 C
660 C
661 C
662 C
663 C
664 C
665 C
666 C
667 C
668 C
669 C
670 C
671 C
672 C
673 C
674 C
675 C
676 C
677 C
678 C
679 C
680 C
681 C
682 C
683 C
684 C
685 C
686 C
687 C
688 C
689 C
690 C
691 C
692 C
693 C
694 C
695 C
696 C
697 C
698 C
699 C
700 C
701 C
702 C
703 C
704 C
705 C
706 C
707 C
708 C
709 C
710 C
711 C
712 C
713 C
714 C
715 C
716 C
717 C
718 C
719 C
720 C
721 C
722 C
723 C
724 C
725 C
726 C
727 C
728 C
729 C
730 C
731 C
732 C
733 C
734 C
735 C
736 C
737 C
738 C
739 C
740 C
741 C
742 C
743 C
744 C
745 C
746 C
747 C
748 C
749 C
750 C
751 C
752 C
753 C
754 C
755 C
756 C
757 C
758 C
759 C
760 C
761 C
762 C
763 C
764 C
765 C
766 C
767 C
768 C
769 C
770 C
771 C
772 C
773 C
774 C
775 C
776 C
777 C
778 C
779 C
780 C
781 C
782 C
783 C
784 C
785 C
786 C
787 C
788 C
789 C
790 C
791 C
792 C
793 C
794 C
795 C
796 C
797 C
798 C
799 C
800 C
801 C
802 C
803 C
804 C
805 C
806 C
807 C
808 C
809 C
810 C
811 C
812 C
813 C
814 C
815 C
816 C
817 C
818 C
819 C
820 C
821 C
822 C
823 C
824 C
825 C
826 C
827 C
828 C
829 C
830 C
831 C
832 C
833 C
834 C
835 C
836 C
837 C
838 C
839 C
840 C
841 C
842 C
843 C
844 C
845 C
846 C
847 C
848 C
849 C
850 C
851 C
852 C
853 C
854 C
855 C
856 C
857 C
858 C
859 C
860 C
861 C
862 C
863 C
864 C
865 C
866 C
867 C
868 C
869 C
870 C
871 C
872 C
873 C
874 C
875 C
876 C
877 C
878 C
879 C
880 C
881 C
882 C
883 C
884 C
885 C
886 C
887 C
888 C
889 C
890 C
891 C
892 C
893 C
894 C
895 C
896 C
897 C
898 C
899 C
900 C
901 C
902 C
903 C
904 C
905 C
906 C
907 C
908 C
909 C
910 C
911 C
912 C
913 C
914 C
915 C
916 C
917 C
918 C
919 C
920 C
921 C
922 C
923 C
924 C
925 C
926 C
927 C
928 C
929 C
930 C
931 C
932 C
933 C
934 C
935 C
936 C
937 C
938 C
939 C
940 C
941 C
942 C
943 C
944 C
945 C
946 C
947 C
948 C
949 C
950 C
951 C
952 C
953 C
954 C
955 C
956 C
957 C
958 C
959 C
960 C
961 C
962 C
963 C
964 C
965 C
966 C
967 C
968 C
969 C
970 C
971 C
972 C
973 C
974 C
975 C
976 C
977 C
978 C
979 C
980 C
981 C
982 C
983 C
984 C
985 C
986 C
987 C
988 C
989 C
990 C
991 C
992 C
993 C
994 C
995 C
996 C
997 C
998 C
999 C

```



```

438 C
439 C
440 C
441 C
442 C
443 C
444 C
445 C
446 C
447 C
448 C
449 C
450 C
451 C
452 C
453 C
454 C
455 C
456 C
457 C
458 C
459 C
460 C
461 C
462 C
463 C
464 C
465 C
466 C
467 C
468 C
469 C
470 C
471 C
472 C
473 C
474 C
475 C
476 C
477 C
478 C
479 C
480 C
481 C
482 C
483 C
484 C
485 C
486 C
487 C
488 C
489 C
490 C
491 C
492 C
493 C
494 C
495 C
496 C
497 C
498 C
499 C
500 C
501 C
502 C
503 C

*****+
* TO DETERMINE AUTHORIZATIONS AVAILABLE FOR FEMALES,
* NON-COMBAT AUTHORIZATIONS ARE DEVELOPED BY
* SUBTRACTING COMBAT AUTHORIZATIONS FROM TOTAL
* AUTHORIZATIONS.
*
*****+
NONCOM(K)=STRTH(K)-COMBAT(K)
*
*****+
* THE CASUALTY REPLACEMENT COMPUTATION IS THE NUMBER
* OF COMBAT-ONLY AUTHORIZATIONS FROM LONG AND CONUS
* TOUR AREAS MULTIPLIED BY THE CASUALTY RATE DEVELOPED
* FROM THE STRATIFICATION MODEL (CAA).
*
*****+
CASREP(K)=((CBTLNG(K)+CBTCNS(K))*RCAS)+0.5
*
*****+
* ROTATION EQUITY COMPUTATION - FIRST A MEAN CONUS TOUR
* LENGTH IS DEVELOPED BY DIVIDING THE TOTAL CONUS AUTH BY
* THE SUM OF THE LONG TOUR AUTH/LONG TOUR LENGTH AND THE
* AND THE SHORT TOUR AUTH/SHORT TOUR LENGTH.
* NOTE** A MAX MEAN CONUS TOUR LENGTH WAS INCLUDED TO
* TRIM DOWN THE EXCESSIVE CONUS TOUR LENGTH
* NUMBERS TO A REASONABLE REAL LIFE NUMBER OF
* MONTHS. THE EXCESSIVE NUMBERS ARE DUE TO SPC'S
* WITH NO OR MINIMAL ROTATION STRUCTURE.
* THE ROTREQ SET-ASIDE IS THE CALCULATED MEAN CONUS TOUR
* LENGTH MULTIPLIED BY THE DIFFERENCE OF THE MALE ONLY
* LONG AUTH/LONG TOUR LENGTH + THE MALE ONLY SHORT AUTH
* /SHCRT TOUR LENGTH AND THE MALE ONLY CONUS AUTH. ROTREQ
* SET-ASIDE SHOULD NOT EXCEED THE TOTAL INTERCHANGEABLE
* POOL.
*
*****+
RSTL=STL
RLTL=LTL
RMCL=MAXCL
RLONG=LONG(K)
RSHORT=SHORT(K)
RCONUS=CONUS(K)
RNLng=CBTLNG(K)
RNSHT=CBTSHT(K)
RNCNS=CBTCNS(K)
CL=(RLONG/RLTL)+(RSHORT/RSTL)
*
*****+
* IF THE DENOMINATOR OF THE EQUATION
* CL=RCONUS/((RLONG/RLTL)+(RSHORT/RSTL)) IS ZERO THEN THE
* CONUS TOUR LENGTH IS INDETERMINATE - THIS CASE IS
* HANDLED BY SETTING THE DENOMINATOR TO THE MAXIMUM
* CONUS TOUR LENGTH ALLOWED, RMCL. IF IT IS NOT ZERO THEN
* CALCULATE A MEAN CONUS TOUR LENGTH.
*
*****+
IF(CL.EQ.0.0) THEN
    CL=RMCL

```

```

505      MAX48(K)='+'  

506      ELSEF    CL=RCONUS/CL  

507      ENDIF  

508      C  

509      C  

510      C  

511      C      IF THE CALCULATED MEAN CONUS TOUR LENGTH IS GREATER THAN  

512      C      THE MAXIMUM CONUS TOUR LENGTH ALLOWED THEN THE MEAN CONUS  

513      C      LENGTH IS SET TO THE MAXIMUM CONUS TOUR LENGTH ALLOWED.  

514      C  

515      C  

516      C  

517      C      IF(CL.GT.RMCL) THEN  

518      C          CL=RMCL  

519      C          MAX48(K)='+'  

520      ENDIF  

521      C  

522      C  

523      C  

524      C      IF THE CALCULATED MEAN CONUS TOUR LENGTH IS NEGATIVE OR  

525      C      ZERO THEN THIS CASE REPRESENTS AN AUTHORIZATIONS STRUC-  

526      C      TURE WITH NO CONUS AUTHORIZATIONS HENCE NO ROTATION  

527      C      STRUCTURE.  

528      C  

529      C  

530      C  

531      C      IF(CL.LE.0.0) THEN  

532      C          CL=0.0  

533      C          MAX48(K)='-'  

534      ENDIF  

535      C  

536      C  

537      C  

538      C      SAVE THE MEAN CONUS TOUR LENGTH AND CALCULATE THE  

539      C      ROTATION EQUITY SET-ASIDE.  

540      C  

541      C  

542      C  

543      C      CMT(K)=CL+0.5  

544      C      ROTREQ(K)=CL*((RNLng/RLTL)+(RNSHT/RSTL))-RNcns+0.5  

545      C  

546      C  

547      C  

548      C      IF THE ROTATION EQUITY SET-ASIDE IS NEGATIVE THEN SET IT  

549      C      TO ZERO AND IF THIS SET-ASIDE EXCEEDS THE INTERCHANGEABLE  

550      C      AUTHORIZATIONS THEN SET IT TO THE NUMBER OF INTERCHANGE-  

551      C      APLF AUTHORIZATIONS.  

552      C  

553      C  

554      C  

555      C      IF(ROTREQ(K).LT.0) THEN  

556      C          ROTREQ(K)=0  

557      ENDIF  

558      C      IF(ROTREQ(K).GT.NONCOM(K)) THEN  

559      C          ROTREQ(K)=NONCOM(K)  

560      ENDIF  

561      C

```

```

562 C
563 C
564 C      * MALE NON-COMBAT REQUIREMENTS ARE DETERMINED BY USING THE *
565 C      * MAXIMUM REQUIREMENT OF ROTATION EQUITY AND CASUALTY
566 C      * REPLACEMENT SET-ASIDES. MALE(K) IS THE NUMBER OF NON-
567 C      * COMBAT AUTHORIZATIONS TO BE FENCED OFF FOR MEN AND
568 C      * THEREFORE CLOSED TO WOMEN.
569 C
570 C
571 C
572 C      MALE(K)=MAXC(ROTREQ(K),CASREP(K))
573 C
574 C
575 C
576 C      * THE THEORETICAL CONTENT FOR WOMEN IS CALCULATED BY
577 C      * SUBTRACTING THE MALE NON-COMBAT REQUIREMENT FROM THE
578 C      * NON-COMBAT REQUIREMENT.
579 C
580 C
581 C
582 C      FEMACC(K)=NONCOM(K)-MALE(K)
583 C      IF(FEMACC(K).LT.0) THEN
584 C          FEMACC(K)=0
585 C      ENDIF
586 C
587 C      ENDIF
588 C
589 C
590 C
591 C      * FIND THE SMALLEST FEMALE STRTH RATIO WHICH IN ESSENCE IDENTIFIES THE MALE COMBAT + MALE SET-ASIDE MAXIMUM COMBAT RATIO.
592 C      * THIS RATIO IS USED TO CALCULATE THE FEMALE POPULATION AND THE CAREER PROGRESSION SET-ASIDE.
593 C
594 C
595 C
596 C
597 C
598 C      RATIO=1.0
599 C      DO 41 K=1,5
600 C          A=FEMACC(K)
601 C          B=STRTH(K)
602 C          IF(S.GT.0) THEN
603 C              S=A/B
604 C              IF(S.LT.RATIO) THEN
605 C                  RATIO=S
606 C              ENDIF
607 C          ENDIF
608 C          IF(RATIO.GT.1.0) THEN
609 C              RATIO=1.0
610 C          ENDIF
611 C
612 C      ENDDO
613 C
614 C
615 C      * DEVELOPE THE CAREER PROGRESSION SFT-ASIDE BY FIRST CALCULATING THE FEMALE POPULATION = TOTAL POPULATION TIMES THE MIN FEMALE STRTH RATIO. SUBTRACT THIS POPULATION PLUS THE MALE ONLY POPULATION FROM THE TOTAL POPULATION GIVING THE CARPRO SET-ASIDE. THE MAXIMUM MALE SET-ASIDE IS THE LARGEST OF CARPRO, ROTREQ, AND CASREP - NOT TO EXCEED THE INTERCHANGEABLE POOL FROM WHICH THESE SET-ASIDES ARE DRAWN.
616 C
617 C
618 C
619 C
620 C
621 C
622 C
623 C
624 C
625 C      DO 42 K=1,5
626 C          FEMACC(K)=FLOAT(STRTH(K))*RATIO+C.S
627 C          CARPRO(K)=(STRTH(K)-FEMACC(K))-CCOMBAT(K)

```

```

628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
999

```

```

694      ENDIF
695      GO TO 26
696      ENDIF
697
698 C
699 C
700 C
701 C
702 C
703 C
704 C
705 C
706 C
707 C
708 C
709 C
710 45 IF (PROP.EQ.1) THEN
711      PROP=0
712      JCMF=0
713      IF(TROMAX.GT.0) THEN
714          PMAX=(FLOAT(NUM))/TROMAX
715      ELSE
716          PMAX=0.0
717      ENDIF
718      GO TO 25
719
720      ENDIF
721      ENDFILE IFILE
722      IF(RFLAG.EQ.1) THEN
723          WRITE(10,54) JCMF,(CMFTOT(K),K=5,1,-1),CMFTOT(6)
724      ENDIF
725      REWIND IFILE
726      <--RETURN 1
727 48
728 49
729 50
730 51
731 1      FORMAT (I2,A3,6X,I2,3X,6I5)
732 54      FORMAT (I2,1X,A3,6(1X,10))
733 C      1      PPED')
734 C      FORMAT (I3,6I5)
C
END SUBROUTINE FILER

```

```
735 C      SUBROUTINE READR ($)
736 C
737 C      *****
738 C      *
739 C      * SUBROUTINE READR($)
740 C      *
741 C      *   **READS WORKING FILE (FILE IFILE) CREATED BY FILEP*****
742 C      *
743 C      *   NOTE THAT FILE IFILE IS AN UNFORMATTED BINARY FILE
744 C      *
745 C      *****
746 C
747 C      READ(IFILE,END=52) ICMF,MOS,STRTH,COMBAT,NONCOM,MALE,TAADS,FEMACC,
748 C      1  CONTNT,CARPRO,ROTREQ,CMT,RATIO,LTAADS,STAADS,CTAADS,CASREP,NACC,
749 C      2  RCAS,THSREQ,TTHSPC,MAX48
750 C      <--RETURN
751 52    REWIND IFILE
752    <--RETURN 1
753 C
754 C      END SUBROUTINE READR
```

```

755      SUBROUTINE W:YRPT ($)
756
757
758
759
760
761
762
763
764
765
766      REAL PCENT(6)
767      INTEGER SSITOT,TOT,GRDTOT(5),ICT,GRDATH(5),SSIATH,TOTATH
768
769
770
771      * PRINT REPORT HEADING BY CALLING TITLE
772
773
774
775      RET=1
776      IPAGE=1
777      CALL TITLE @----->( 50)
778      WRITE(6,7)
779      7      FORMAT(10X,'FEMALE STRTH TOTALS BY GRADE',10X,'TOTAL PERSACS'
780      1      AUTH BY GRADE',/16X,'SSI',5X,'LT',5X,'CPT',5X,'MAJ',5X,'LTC',
781      2      5X,'COL',5X,'TOTAL',5X,'LT',5X,'CPT',5X,'MAJ',5X,'LTC',
782      3      5X,'COL',5X,'TOTAL') )
783
784
785
786      * INITIALIZE WORKING VARIABLES
787
788
789
790      ICT=0
791      DO 8 I=1,5
792          GRDATH(I)=0
793          GRDTOT(I)=0
794      8      ENDDO
795      TOT=0
796      TOTATH=0
797
798
799      * MAIN LOOP - READ AND PROCESS INFO UNTIL EOF ON FILE IFILE
800
801
802
803
804
805
806      SSITOT=0
807      SSIATH=0
808      CALL READR($999) @----->( 47)
809      ICT=ICT+1
810
811
812      * TOTAL FEMALE STRENGTH NUMBERS AND AUTHORIZATIONS BY
813      * GRADE, BY SSI, AND CALCULATE GRAND TOTALS.
814
815
816      DO 11 I=1,5
817          GRDTOT(I)=GRDTOT(I)+FEMACC(I)
818          SSITOT=SSITOT+FEMACC(I)
819          TOT=TOT+FEMACC(I)
820          GRDATH(I)=GRDATH(I)+STRTH(I)

```

```

821      SSIATH=SSIATH+STRTH(I)
822      TOTATH=TOTATH+STRTH(I)
823 11    ENDDO
824
825      ****+
826      +
827      + PRINT ONLY 50 LINES PER PAGE. EJECT A NEW PAGE AND PRINT
828      + REPORT HEADING.
829
830      ****+
831      IF(ICK.EQ.50) THEN
832          WRITE(6,16)
833          CALL TITLE 9-----> ( 50 )
834          ICK=0
835          WRITE(6,7)
836          ENDIF
837
838      +
839      +
840      + PRINT INFO FOR SSI AND RETURN TO START OF MAIN LOOP
841      +
842
843      ****+
844
845      1   WRITE(6,12) NACC,MOS,(FEMACC(I),I=1,5),SSITOT,(STRTH(I),I=1,5),
846      SSIATH
847      FORMAT(' ',4X,A1,A3,5(2X,I6),18,10X,5(2X,I4),18)
848      GO TO 9
849
850
851      +
852      + ENTRY POINT FOR EOF ON FILE IFILE - PRINT GRADE TOTALS AND
853      + AUTHORIZATION TOTALS. CALCULATE OVERALL PERCENTAGE FILLS
854      + BY GRADE AND PRINT THIS INFO.
855
856
857
858      999  WRITE(6,13) (GRDTOT(I),I=1,5),TOT,(GRDATH(I),I=1,5),TOTATH
859      13    FORMAT(' ',2X,'TOTALS',6I8,10X,6I8)
860      DO 14 I=1,5
861          IF(GRDATH(I).NE.0) THEN
862              PCENT(I)=FLOAT(GRDTOT(I))/FLOAT(GRDATH(I))
863          ENDIF
864          PCENT(I)=PCENT(I)*100.0
865 14    ENDDO
866          IF(TOTATH.NE.0) THEN
867              PCEVT(S)=FLOAT(TOT)/FLOAT(TOTATH)*100.0
868          ENDIF
869          WRITE(6,15) (PCENT(I),I=1,5)
870 15    FORMAT(' ',2X,% AUTH ,6(3X,F5.1))
871          WRITE(6,16)
872 15    FORMAT(' ',T44,'* DENOTES NON-ACCESSION SPECIALTY')
873
874  C    <--RETURN 1
875  C    END SUBROUTINE MAXRPT

```

```

76 C
77 C
78 C
79 C
80 C
81 C
82 C
83 C
84 C
85 C
86 C
87 C
88 C
89 C
90 C
91 C
92 C
93 C
94 C
95 C
96 C
97 C
98 62
99 C
100 C
101 C
102 C
103 C
104 C
105 C
106 C
107 C
108 C
109 C
110 C
111 C
112 C
113 C
114 C
115 63
116 C
117 C
118 C
119 C
120 C
121 C
122 C
123 C
124 C
125 C
126 C
127 C
128 C
129 C
130 C
131 C
132 C
133 64
134 C
135 C
136 C
137 C
138 C
139 C
140 C
141 C

SUBROUTINE FRPT ($)

***** * *****
* SUBROUTINE FRPT($)
* PRINTS THE FULL 3-DIGIT MOS REPORT
*****
INTEGER I,J,K
REAL AID,FILL,PERMOS
+++++ ++++++
* INITIALIZE WORKING VARIABLES
+++++ ++++++
DO 62 K=1,10
  TOTAL(K)=0
  GTO(K)=0
ENDDO
TOTAL(11)=0
AVAIL=0
AVAIL1=0
AVAIL2=0
IPAGE=1
+++++ ++++++
* ENTRY POINT TITLE - RETRIEVES DATE, TIME FROM SYSTEM AND
* PRINTS TYPE OF RUN (CONSTRAINED OR UNCONSTRAINED). PRINTS
* REPORT HEADING.
+++++ ++++++
ENTRY TITLE
CALL ADATE (DATE,TIME) @-----> ( 72)
I=0
PRINT 80,RTAB
PRINT 81, DATE,IPAGE
TOP=0
CALL TYPER @-----> ( 63)
IPAGE=IPAGE+1
+++++ ++++++
* IF ENTRY INTO SUBROUTINE WAS VIA ENTRY POINT TITLE THEN RETURN
* TO CALLING PROGRAM ELSE READ SSI DATA FROM FILE IFILE AND
* PRODUCE THE FULL REPORT.
+++++ ++++++
IF (RET.EQ.1) THEN
<--RETURN
ELSE
  CALL READR ($79) @-----> ( 47)
  +++++ ++++++
  * PRINT SSI THREE DIGIT IDENTIFIER AND GET SCS FEM-DESIG
  * INVENTORY NUMBERS
  +++++ ++++++

```

```

942      PRINT P2, NACC,MOS,ICMF
943      DO 66 J=1,MAXCMF
944          IF (ISPEC(J).EQ.ICMF) THEN
945              DO 65 K=1,5
946                  JNVENT(K)=INVENT(K,J)
947              ENDDO
948          ENDIF
949      65
950  C
951  C
952  C
953  C
954  C
955  C
956  C
957      PRINT R3, (GRD(K),STRTH(K),COMBAT(K),NONCOM(K),MALE(K),
958      FEMACC(K),CONTNT(K),JNVENT(K),CARPRO(K),ROTREQ(K),CASREP(K),
959      THSREQ(K),CMT(K),MAX48(K),K=1,5)
960  C
961  C
962  C
963  C
964  C
965  C
966  C
967      DO 68 K=1,11
968          TOTAL(K)=0
969  68
970      ENDDO
971      DO 69 K=1,5
972          TOTAL(1)=TOTAL(1)+STRTH(K)
973          TOTAL(2)=TOTAL(2)+COMBAT(K)
974          TOTAL(3)=TOTAL(3)+NONCOM(K)
975          TOTAL(4)=TOTAL(4)+MALE(K)
976          TOTAL(5)=TOTAL(5)+FEMACC(K)
977          TOTAL(6)=TOTAL(6)+CONTNT(K)
978          TOTAL(7)=TOTAL(7)+JNVENT(K)
979          TOTAL(8)=TOTAL(8)+CARPRO(K)
980          TOTAL(9)=TOTAL(9)+ROTREQ(K)
981          TOTAL(10)=TOTAL(10)+CASREP(K)
982          TOTAL(11)=TOTAL(11)+THSREQ(K)
983  69
984      ENDDO
985      IF (JCWF.EQ.ICMF) THEN
986          DO 70 K=1,5
987              JNVENT(K)=0
988          ENDDO
989      ENDIF
990  C
991  C
992  C
993  C
994  C
995  C
996      ENTRY TOTLE
997      DO 73 K=1,5
998          GTO(1)=GTO(1)+STRTH(K)
999          GTO(2)=GTO(2)+COMBAT(K)
1000          GTO(3)=GTO(3)+NONCOM(K)
1001          GTO(4)=GTO(4)+MALE(K)
1002          GTO(5)=GTO(5)+FEMACC(K)
1003          GTO(6)=GTO(6)+CONTNT(K)
1004          GTO(7)=GTO(7)+CARPRO(K)
1005          GTO(8)=GTO(8)+ROTREQ(K)
1006          GTO(9)=GTO(9)+CASREP(K)
1007          GTO(10)=GTO(10)+THSREQ(K)

```



```

1074      IF (RET.EQ.1) THEN
1075      -----RETURN 1
1076      ELSE
1077          I=I+1
1078          ENDIF
1079          IF(I.LT.4) THEN
1080              GO TO 64
1081          ELSE
1082              CALL LEGEND 5----->( 67)
1083              PRINT 87
1084          ENDIF
1085      ENDIF
1086      GO TO 63
1087 C
1088 C
1089 C
1090 C
1091 C
1092 C
1093 C
1094 C
1095 C
1096 C
1097 79      PRINT 87
1098      ENTRY GRAND
1099      PRINT E8
1100      PRINT 89, GTO,AVAIL2
1101      IF (SUM.EQ.1) THEN
1102      -----RETURN
1103      ELSE
1104      -----RETURN 1
1105      ENDIF
1106 C
1107 80      FORMAT ('1',1T52,A28/T58,'**UNCLASSIFIED**')
1108      FORMAT (1X,DATE,A8,T56,'DEPARTMENT OF THE ARMY',T123,'PAGE ',I3
1109      1 /T46,'UNITED STATES ARMY CONCEPTS ANALYSIS AGENCY',T47,'PERSONNEL
1110      SYSTEMS ANALYSIS DIVISION',T50,'OFFICER ASSIGNMENT SYSTEM NO
1111      DEL')
1112 82      FORMAT ('/0',A1,I3,4X,'TOTAL',3X,'TOTAL',4X,'TOTAL',5X,'INTCHG'
1113      1 ,6X,'MAXIM',3X,'CURRENT',4X,'TOTAL',33X,'CONUS',TO,'PERSACS',2X,'
1114      ONLY',3X,'INTCHG',2X,'SET ASIDE',4X,'FEMALE',3X,'FEM-FILL',2X,'FE
1115      M-DESIG',1X,'CARPRO',2X,'ROTEQ',1X,'CASREP',1X,'FEM-THS',1X,'MEAN
1116      /T11,'AUTH',4X,'AUTH',3X,'AUTH(WW)',3X,'M-ONLY',6X,'STRTH',3X,'BY
1117      DTSPC',3X,'SPEC',1X,I2,4X,'REQ',4X,'REQ',4X,'REQ',4X,'REQ',3X,'TOU
1118      R')
1119 83      FORMAT (1X,A3,5X,I5,3X,I5,5X,I5,5X,I5,4X,I5,5X,I5,6X,I4,3X,
1120      1 I4,3X,I4,2X,I5,I6,A1)
1121 84      FORMAT (2%,TOTAL,T10,I5,3X,I5,5X,I5,2(5X,I5),4X,I5,5X,I5,5X,4(I
1122      1 4,3X),7X,'% OF SPC',F6.1)
1123 85      FORMAT (1X,5X,'CASREP RATE = ',F6.3,6X,'FEMALE STRTH RATIO = ',F6.3,
1124      1 2X,'AVAIL = ',I6,2X,'FILL = ',F7.1,2X,'THS % ',F6.2)
1125 86      FORMAT (I2,I3,9X,I6,I5)
1126 87      FORMAT (2%,T58,'**UNCLASSIFIED**')
1127 88      FORMAT ('/0',T10,'TOTAL',3X,'TOTAL',4X,'TOTAL',5X,'INTCHG',6X,'MAXI
1128      1 M',3X,'CURRENT',43X,'TL AVAIL',T5,'PERSACS',2X,'M-ONLY',3X,'INTCHG
1129      2 ,2X,'SET ASIDE',4X,'FEMALE',3X,'FEM-FILL',2X,'CARPRO',5X,'ROTEQ',
1130      3 X,'CASREP',4X,'FEM-THS',7X,'SPACES',T10,'AUTH',5X,'AUTH',3X,'AUTH
1131      4 (WW)',3X,'M-ONLY',6X,'STRTH',3X,'BY DTSPC',5X,'REQ',7X,'REQ',6X,'P
1132      5 EG',7X,'REQ',3EX,'TO FILE')
1133 89      FORMAT ('/0',GRAND/1X,'TOTAL',2X,2(I5,?X),0(I6,4X))
1134 C
1135 C
END SUBROUTINE FRPT

```

```

1136 C SUBROUTINE DATA ($)
1137 C
1138 C ***** SUBROUTINE DATA ($) *****
1139 C
1140 C
1141 C
1142 C
1143 C * READS FILE 26 THE AUTHORIZATION DATA BASE *
1144 C
1145 C
1146 C
1147 C INTEGER K,IQUAD
1148 C
1149 C ++++++ FILE 26 IS THE CONVERTED USAMSSA AUTHORIZATIONS DATA ++++++
1150 C
1151 C
1152 C
1153 C
1154 C
1155 C 1 READ (26,END=93) NOS,STRTH,COMBAT,LONG,SHORT,CONUS,CBTLNG,CBTSHT,
1156 C CBTCNS,TAAADS,LTAADS,STAADS,CTAADS
1157 C
1158 C
1159 C
1160 C + IF A 'CONTENT' SPC IS NOT FOUND IN 'AUTH' FILE IT IS DROPPED.
1161 C + IF AN 'AUTH' SPC IS NOT FOUND IN 'CONTENT' FILE THE 'AUTH' IS
1162 C + IS DROPPED. A MESSAGE IS PRINTED IN EITHER CASE.
1163 C
1164 C
1165 C + IF THE SPC HAS NO AUTHORIZATIONS IT IS NOT PROCESSED AND
1166 C + A MESSAGE IS PRINTED.
1167 C
1168 C
1169 C
1170 C IQUAD=0
1171 C DO 91 K=1,6
1172 C   IQUAD=IQUAD+STRTH(K)
1173 C 91 ENDDO
1174 C
1175 C
1176 C
1177 C + CHECK IF THE AUTHORIZATIONS FOR ALL GRADES IS GREATER
1178 C + THAN ZERO. IF IT IS NOT THEN SKIP THIS SPC.
1179 C
1180 C
1181 C
1182 C IF (IQUAD.GT.0) THEN
1183 C   IF ((NNOS-MMOS).LT.0) THEN
1184 C
1185 C
1186 C   + IF THE SPC FROM THE AUTH FILE IS LESS THAN THE SPC
1187 C   + FROM THE INVENTORY FILE THEN THE SPC AUTH IS NOT
1188 C   + PROCESSED.
1189 C
1190 C
1191 C
1192 C
1193 C   IF (PRTON.EQ.'Y') THEN
1194 C     PRINT 99, NOS,STRTH
1195 C   ENDIF
1196 C
1197 C ELSE

```

```
1198 C
1199 C
1200 C
1201 C
1202 C
1203 C
1204 C
1205 C
1206 C
1207 C
1208 C
1209 C
1210 C
1211 C
1212 C
1213 C
1214 C
1215 C
1216 C
1217 C
1218 C
1219 C
1220 C
1221 C
1222 C
1223 C
1224 C
1225 C
1226 C
1227 C
1228 C
1229 C
1230 93
1231 C
1232 C
1233 C
1234 97
1235 1
1236 98
1237 99
1238 1
1239 C
1240 C

+-----+
+ IF THE SPC FROM THE AUTH FILE IS GREATER THAN THE SPC
+ FROM THE INVENTORY FILE THEN THE AUTH FILE IS BACKSPACED
+ ONE RECORD AND THE SPC INVENTORY IS NOT PROCESSED.
+-----+
IF ((NNOS-MMOS).GT.0) THEN
  IF (PRTON.EQ.'Y') THEN
    PRINT 97, MOS,CONTNT
  ENDIF
  BACKSPACE 26
  -----RETURN 1
ELSE
  +-----+
  + AUTH SPC AND INVENTORY SPC MATCH HENCE PROCESS THIS
  + SPC. RETURN TO FILER ROUTINE.
  +-----+
  -----RETURN
ENDIF
ELSE
  IF (PRTON.EQ.'Y') THEN
    PRINT 98, NOS
  ENDIF
  -----GO TO 90
  -----RETURN
FORMAT (1HO,1X,' SPC ',A3,' NOT IN AUTH FILE. ',1X,' CONTENT = ',6
      1 (1X,I6))
FORMAT (1HO,' SPC ',A3,' HAS ZERO AUTH ON INPUT FILE 26')
FORMAT (1HO,1X,' SPC ',A3,' NOT IN CONTENT FILE. ',1X,' AUTH = ',6(1
      1 X,I6))
END SUBROUTINE DATA
```

```
1241 C SUBROUTINE SUMR ($)
1242 C ****
1243 C *
1244 C * SUBROUTINE SUMR($)
1245 C *
1246 C *
1247 C * PRINTS SUMMARY REPORT
1248 C *
1249 C ****
1250 C *
1251 C INTEGER K
1252 C ****
1253 C *
1254 C * INITIALIZE WORKING VARIABLES AND TITLE PAGE.
1255 C *
1256 C ****
1257 C *
1258 C ****
1259 C *
1260 C SUM=1
1261 C IPAGE=1
1262 C RET=1
1263 C CALL TITLE 6-----> ( 50)
1264 C RET=0
1265 C DO 117 K=1,10
1266 C GTO(K)=0
1267 117 ENDDO
1268 C AVAIL=0
1269 C AVAIL2=0
1270 C ****
1271 C *
1272 C *
1273 C * BEGINNING OF MAIN LOOP - READ A RECORD FROM FILE IFILE AND
1274 C * PROCESS THE DATA.
1275 C *
1276 C ****
1277 C 118 CALL READR ($120) 8-----> ( 47)
1278 C *
1279 C ****
1280 C *
1281 C *
1282 C * TOTLE IS ENTRY POINT IN SUBROUTINE FRPT.
1283 C *
1284 C *
1285 C ****
1286 C CALL TOTLF 2-----> ( 51)
1287 C AVAIL=C
1288 C ****
1289 C *
1290 C *
1291 C * ACCUMULATE AVAILABLE SPACES FOR THIS SPC.
1292 C *
1293 C ****
1294 C *
1295 C DO 119 K=1,5
1296 C AVAIL=AVAIL+(FEMACC(K)-CONTNT(K))
1297 119 ENDDO
1298 C IF(AVAIL.LT.0) THEN
1299 C AVAIL=0
1300 C ENDIF
1301 C AVAIL2=AVAIL2+AVAIL
1302 C GO TO 118
1303 C
```

```
1304 C      ++++++  
1305 C      +  
1306 C      + ENTRY FOR EOF ON FILE IFILE (INTERMEDIATE FILE).  
1307 C      + GRAND IS ENTRY POINT IN SUBROUTINE FRPT TO PRINT GRAND TOTALS.  
1308 C      +  
1309 C      ++++++  
1310 C      +  
1311 120    CALL GRAND B-----> ( 53 )  
1312      SUM=0  
1313      <-RETURN 1  
1314 C      END SUBROUTINE SUMR .
```

```

1316 C SUBROUTINE DIST ($)
1317 C ****
1318 C *
1319 C * SUBROUTINE DIST($)
1320 C *
1321 C * PRINT THE DISTRIBUTION REPORT
1322 C *
1323 C ****
1324 C
1325 C
1326 C 1 REAL ASUM,RATHI,RATLO,RATSD,RATSQR,RATSUM,RMEAN,CASLO,CASHI,CASSUM
1327 C ,CASSQR,CMEAN,CASSD,THSLO,THSHI,THSSUM,THSSQR,TMEAN,THSSD
1328 C ****
1329 C +
1330 C + SUMMARY REPORT IS AUTOMATICALLY CREATED BEFORE DISTRIBUTION
1331 C + REPORT. INITIALIZE WORKING VARIABLES.
1332 C +
1333 C ****
1334 C
1335 C
1336 C CALL SUMR ($122) @-----> ( 56)
1337 C 122 RATLO=1
1338 C RATHI=0
1339 C RATSUM=0
1340 C RATSQR=0
1341 C CASLO=1
1342 C CASHI=0
1343 C CASSUM=0
1344 C CASSQR=0
1345 C THSLO=1
1346 C THSHI=0
1347 C THSSUM=0
1348 C THSSQR=0
1349 C ASUM=0
1350 C
1351 C ****
1352 C +
1353 C + BEGINNING OF MAIN LOOP - READ A RECORD FROM FILE IFILE
1354 C + AND PROCESS THIS DATA.
1355 C +
1356 C ****
1357 C
1358 C 123 CALL READP ($124) @-----> ( 47)
1359 C ASUM=ASUM+1
1360 C
1361 C ****
1362 C +
1363 C + IDENTIFY ARMY WIDE HIGH AND LOW RANGES FOR FEMALE STRENGTH
1364 C + RATIO, CASUALTY REPLACEMENT RATES, AND THS RATES.
1365 C +
1366 C ****
1367 C
1368 C IF(RATIO.LT.RATLO) THEN
1369 C   RATLO=RATIO
1370 C ENDIF
1371 C IF(RATIO.GT.RATHI) THEN
1372 C   RATHI=RATIO
1373 C ENDIF
1374 C IF(RCAS.LT.CASLO) THEN
1375 C   CASLO=RCAS
1376 C ENDIF
1377 C IF(RCAS.GT.CASHI) THEN
1378 C   CASHI=RCAS
1379 C ENDIF
1380 C IF(TTHSPC.LT.THSLO) THEN
1381 C   THSLO=TTHSPC

```

```

1392 ENDIF
1393 IF(TTHSPC.GT.THSI) THEN
1394   THSI=TTHSPC
1395 ENDIF
1396 C
1397 C
1398 C
1399 C
1400 C
1401 C
1402 C
1403 C
1404 C
1405 C
1406 C
1407 C
1408 C
1409 C
1410 C
1411 C
1412 C
1413 C
1414 C
1415 C
1416 C
1417 124 IF(ASUM.GT.0.0) THEN
1418   RMEAN=RATSUM/ASUM
1419   CMEAN=CASSUM/ASUM
1420   TMEAN=THSSUM/ASUM
1421   IF((RATSQR/ASUM-RMEAN**2).GE.0.0) THEN
1422     RATSD=SQRT(RATSQR/ASUM-RMEAN**2)
1423   ENDIF
1424   IF((CASSQR/ASUM-CMEAN**2).GE.0.0) THEN
1425     CASSD=SQRT(CASSQR/ASUM-CMEAN**2)
1426   ENDIF
1427   IF((THSSQR/ASUM-TMEAN**2).GE.0.0) THEN
1428     THSSD=SQRT(THSSQR/ASUM-TMEAN**2)
1429   ENDIF
1430 ELSE
1431   RMEAN=0.0
1432   RATSD=0.0
1433   CMEAN=0.0
1434   CASSD=0.0
1435   TMEAN=0.0
1436   THSSD=0.0
1437 ENDIF
1438 PRINT 125, RMEAN,RATLO,RATHI,RATSD,CMEAN,CASLO,CASHI,CASSD,TMEAN,
1439 1 THSLO,THSHI,THSSD
1440 1--RETURN 1
1441 C
1442 125 FORMAT (1'0',23X,'MEAN',8X,'LO--RANGE--HI',8X,'STANDARD DEVIATION'
1443 1 /'0','FEMALE STRENGTH RATIO',2X,F7.4,4X,F6.2,4X,F6.2,11X,F8.4/10',CA
1444 2 SUALTY REPL RATE',2X,F7.4,4X,F6.2,4X,F6.2,11X,F8.4/10',THS RATE',
1445 3 12X,F7.4,4X,F6.2,4X,F6.2,11X,F8.4)
1446 C
1447 C
END SUBROUTINE DIST

```

```

1445      SUBROUTINE CMFT (S)
1446
1447      ****
1448      * SUBROUTINE CMFT(S)
1449      * PRINT FEMALE STRENGTH TOTALS BY SPC
1450      *
1451      ****
1452      INTEGER I,II,J,K,KK,L,FTOT,NTOT,ATOT,MTOT,DTOT,TTOT,ITOT,STOT
1453      REAL A
1454
1455      ++++++
1456      + INITIALIZE WORKING VARIABLES
1457      +
1458      ++++++
1459      IPAGE=1
1460      RET=1
1461      FTOT=0
1462      NTOT=0
1463      ATOT=0
1464      MTOT=0
1465      DTOT=0
1466      TTOT=0
1467      ITOT=0
1468      STOT=0
1469      JCMTF=0
1470
1471      ++++++
1472      + INITIALIZE TOT ARRAYS TO ZERO AND NON-ACCESSION FLAG TO BLANK.
1473      +
1474      ++++++
1475      DO 126 K=1,NUMCMF
1476      NACCFG(K)=' '
1477      TOTMLE(K)=0
1478      TOTATH(K)=0
1479      TOTCNT(K)=0
1480      TOTFIL(K)=0
1481      TOTINV(K)=0
1482      TOTTHS(K)=0
1483      TOTPCT(K)=0
1484      TOTINT(K)=0
1485      TOTSAS(K)=0
1486      TOTCMF(K)=C
1487      ENDDO
1488
1489      ++++++
1490      + BEGINNING OF MAIN LOOP - READ A RECORD FROM FILE IFIL AND
1491      + PROCESS DATA.
1492      +
1493      ++++++
1494      CALL READR ($136) @-----> ( 47)
1495      DO 128 K=1,NUMCMF
1496      KK=K
1497      IF (ICMF.EQ.CMFTAB(K)) THEN
1498          DO 131 J=1,MAXCMF
1499              IF (ISPEC(J).EQ.ICMF) THEN
1500                  DO 130 I=1,MAXGRD
1501                      JNVENT(I)=INVENT(I,J)
1502
1503
1504
1505
1506      127
1507
1508
1509
1510
1511
1512
1513

```

```

1514 130
1515      ENDDO
1516          GC TO 132
1517      ENDIF
1518 131
1519      ENDDO
1520          DO 135 L=1,MAXGRD
1521              FTOT=FTOT+FEMACC(L)
1522              VTOT=NTOT+CONTNT(L)
1523              ATOT=ATOT+STRTH(L)
1524              MTOT=MTOT+COMBAT(L)
1525              TTOT=TTOT+THSREQ(L)
1526              ITOT=ITOT+NONCOM(L)
1527              STOT=STOT+MALE(L)
1528              TOTCNT(KK)=TOTCNT(KK)+CONTNT(L)
1529              IF (JCMF.EQ.ICMF) THEN
1530                  DO 133 II=1,MAXGRD
1531                      JNVENT(II)=0
1532                  ENDDO
1533              ENDIF
1534              DTOT=DTOT+JNVENT(L)
1535              TOTTHS(KK)=TOTTHS(KK)+THSREQ(L)
1536              TOTATH(KK)=TOTATH(KK)+STRTH(L)
1537              TOTMLE(KK)=TOTMLE(KK)+COMBAT(L)
1538              TOTINV(KK)=TOTINV(KK)+JNVENT(L)
1539              TOTINT(KK)=TOTINT(KK)+NONCOM(L)
1540              TOTSAS(KK)=TOTSAS(KK)+MALE(L)
1541              TOTCMF(KK)=TOTCMF(KK)+FEMACC(L)
1542
1543      NACCFG(KK)=NACC
1544      JCMF=ICMF
1545      GO TO 127
1546      ENDIF
1547 128
1548      ENDDO
1549      GO TO 127
1550 C
1551 C
1552 C
1553 C
1554 136
1555 CALL TITLE A----->( 50)
1556 RET=0
1557 DO 137 K=1,NUMCMF
1558     A=TOTCNT(K)
1559     IF(TOTCMF(K).GT.0) THEN
1560         TOTFIL(K)=(A/TOTCMF(K))*100.
1561     ELSE
1562         TOTFIL(K)=0.0
1563     ENDIF
1564     A=TOTCMF(K)
1565     IF(FTOT.GT.0) THEN
1566         TOTACC(K)=(A/FTOT)*100.
1567     ELSE
1568         TOTACC(K)=0.0
1569     ENDIF
1570     A=TOTCMF(K)
1571     IF(TOTATH(K).GT.0) THEN
1572         TOTPCT(K)=(A/TOTATH(K))*100.
1573     ELSE
1574         TOTPCT(K)=0.0
1575     ENDIF
1576 ENDDO
1577 C

```

```

1577 C
1578 C
1579 C
1580 C
1581 C
1582 C
1583 C
1584 C
1585 C
1586 C
1587 C
1588 C
1589 C
1590 C
1591 C
1592 C
1593 C
1594 C
1595 C
1596 C
1597 C
1598 C
1599 C
1600 C
1601 C
1602 C
1603 C
1604 C
1605 C
1606 C
1607 C
1608 C
1609 C
1610 C
1611 C
1612 C
1613 C
1614 C
1615 C
1616 C

      ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++
      + PRINT TOT AUTH,TOT M-ONLY,TOT FEMALES,% OF TOT FEM,CURRENT
      + CONTENT, % FILL,CURRENT DESIG,AND TOT FEM-THS.
      ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++
      IF(MAXGRD.EQ.5) THEN
        PRINT 140
      ELSE
        IF(MAXGRD.EQ.2) THEN
          PRINT 142
        ELSE
          IF(MAXGRD.EQ.1) THEN
            PRINT 141
          ENDIF
        ENDIF
      ENDIF
      PRINT 138
      WRITE(6,F138)(NACCFG(K),CMFTAB(K),TOTATH(K),TOTMFL(K),TOTINT(K),
      TOTSAS(K),TOTCMF(K),TOTACC(K),TOTPCT(K),TOTCNT(K),TOTFIL(K),
      TOTINV(K),TOTTHS(K),K=1,NUMCMF)
      WRITE(6,143) ATOT,MTOT,ITOT,STOT,FTOT,NTOT,DTOT,TTOT
      PRINT 139
      <--RETURN 1
      FORMAT (' ',14X,'SPC',3X,'PERSACS',2X,'M-ONLY',2X,'INTCHG',2X,'M-O
      NLY',3X,'FEMALE',2(4X,'TOTAL'),3X,'FEM-FILL',4X,'FEM-DESIG'
      *2X,'FEM-THS'/22X,2('AUTH',5X),'AUTH',2Y,'SET ASIDE',2X,'STRTH',5X
      *2X,'FEM',6X,'AUTH',2X,'BY DT$PEC',3X,'FILL',2(3X,'BY SPEC'))//)
      FORMAT (' ',21X,5('TOTAL',4X),'% OF',5X,'% OF',4X,'CURRENT',12X,'T
      OTAL',5X,'TOTAL')
      FORMAT (' ',22X,4('LTS',6X),'LTS',2(5X,'% OF'),4X,'LTS',14X,'LTS',
      8X,'LTS')
      FORMAT (' ',20X,5('LT-CPT',3X),1X,'% OF',5X,'% OF',4X,'LT-CPT',12X
      *5X,'LT-CPT')
      FORMAT (' ',15X,'TOTAL',2X,5(15,4X),18X,15,13X,15,5X,15)
      FORMAT (' ',T44,*' DENOTES NON-ACCESSION SPECIALTY')

END SUBROUTINE CMFT

```

```
1617 C SUBROUTINE TYPER
1618 C ****
1619 C *
1620 C * SUBROUTINE TYPER
1621 C *
1622 C * ***** PRINT HEADER FOR FILE TYPE *****
1623 C *
1624 C *
1625 C ****
1626 C
1627 C INTEGER I
1628 C CHARACTER CASTYP(4)*9
1629 C DATA (CASTYP(I),I=1,4) /' D+30  ',', D+60  ',', D+90  ',', NC CA
1630 C SREP/'
1631 C IF (TOP.EQ.1) THEN
1632 C   PRINT 192
1633 C ENDIF
1634 C IF(CRAT.GE.0) THEN
1635 C   I=(CRAT-4)/10+1
1636 C ELSE
1637 C   I=4
1638 C ENDIF
1639 C GO TO (190,191), KEEP
1640 C ****
1641 C +
1642 C +
1643 C + FILE TYPE EQUAL 1 - CONSTRAINED
1644 C +
1645 C ****
1646 C
1647 190 PRINT 193, CASTYP(I),NUM
1648 C <--RETURN
1649 C ****
1650 C +
1651 C +
1652 C + FILE TYPE EQUAL 2 - UNCONSTRAINED
1653 C +
1654 C ****
1655 C
1656 191 PRINT 194, CASTYP(I)
1657 C <--RETURN
1658 C
1659 192 FORMAT ('1')
1660 193 FORMAT ('0',T52,A9,' CONSTRAINED',I7)
1661 194 FORMAT ('0',T54,A9,' UNCONSTRAINED')
1662 C
1663 C END SUBROUTINE TYPER
```

```
1664 C      SUBROUTINE SPCONV (IARG,A,NN)
1665 C
1666 C      ****
1667 C      *
1668 C      * SUBROUTINE SPCONV
1669 C
1670 C      * THIS SUBROUTINE IS USED TO INDEX THE OPMD-MANAGED SPECIALTIES
1671 C      * IN EFFECT SEP 82. OLD SPECIALTIES WHICH HAVE BEEN ROLLED UP ARE
1672 C      * APPROPRIATELY INDEXED.
1673 C
1674 C      ****
1675 C
1676 C      INTEGER A(NN),IARG,ISW,I,NN
1677 C      ISW=0
1678 1      DO 2 I=1,NN
1679       IF (A(I).EQ.IARG) THEN
1680         IARG=I
1681       <-----RETURN
1682       ENDIF
1683 2      ENDDO
1684       IF (ISW.EQ.0) THEN
1685         ISW=1
1686 C
1687 C      ****
1688 C      * THIS SECTION CHECKS FOR ROLLED UP SPECIALTIES
1689 C
1690 C      ****
1691 C
1692 C      IF(IARG.EQ.26) THEN
1693       IARG=25
1694     ELSE
1695       IF(IARG.EQ.76.OR.IARG.EQ.77) THEN
1696         IARG=91
1697       ELSE
1698         IF(IARG.EQ.83.OR.IARG.EQ.93) THEN
1699           IARG=92
1700         ELSE
1701           IF(IARG.GE.86.AND.IARG.LE.88) THEN
1702             IARG=95
1703           ENDIF
1704         ENDIF
1705       ENDIF
1706     ENDIF
1707   ENDIF
1708   GO TO 1
1709
1710 <-----RETURN
1711   ENDIF
1712 C
1713 C      END SUBROUTINE SPCONV
```

```

1714 C
1715 C SUBROUTINE ROTREP($)
1716 C ****
1717 C *
1718 C * SUBROUTINE ROTREP
1719 C *
1720 C * PRODUCES OPTIONAL ROTATION EQUITY REPORT - SHOULD BE USED TO
1721 C * EXAMINE CURRENT PERSACS AUTHORIZATION STRUCTURE IN AN
1722 C * EFFORT TO EXPLAIN THOSE SPCs WITH AN INDETERMINATE ROTATION
1723 C * BASE.
1724 C *
1725 C ****
1726 C
1727 C INTEGER GTOT(9),TOTAL(9),K,ICNT
1728 C RET=1
1729 C IPAGE=1
1730 C DO 4 K=1,0
1731 C     GTOT(K)=0
1732 4 ENDDO
1733 C CALL TITLE 9----->( 50)
1734 5 CALL READP($999) 9----->( 47)
1735 C ICNT=ICNT+1
1736 C
1737 C ++++++
1738 C +
1739 C + RETRIEVE TOTAL AUTH, MALE-ONLY AUTH, AND ROTATION EQUITY
1740 C + SET-ASIDES FROM FILE IFILE AND SUM THESE VALUES OVER ALL
1741 C + GRADES.
1742 C +
1743 C ++++++
1744 C
1745 C DO 20 K=1,5
1746 C     GTOT(1)=GTOT(1)+STRTH(K)
1747 C     GTOT(2)=ETOT(2)+COMBAT(K)
1748 C     GTOT(9)=GTOT(9)+ROTREQ(K)
1749 20 ENDDO
1750 C REWIND 26
1751 C
1752 C ++++++
1753 C +
1754 C + GET CONUS, LONG, AND SHORT TOUR AUTH FROM THE AUTH DATA
1755 C + BASE AND SUM THESE VALUES OVER ALL GRADES.
1756 C +
1757 C ++++++
1758 C
1759 25 C READ(26) NOS,STRTH,COMBAT,LONG,SHORT,CONUS,CBTLNG,CBTSHT,CBTCNS,
1760 C TAADS,LTAADS,STAADS,CTAADS
1761 C IF(MOS.NE.NOS) THEN
1762 C     GO TO 25
1763 C ELSE
1764 C     DO 30 K=1,5
1765 C         GTOT(3)=GTOT(3)+CONUS(K)
1766 C         GTOT(4)=GTOT(4)+LONG(K)
1767 C         GTOT(5)=GTOT(5)+SHOPT(K)
1768 C         GTOT(6)=GTOT(6)+CBTCNS(K)
1769 C         GTOT(7)=GTOT(7)+CBTLNG(K)
1770 C         GTOT(8)=GTOT(8)+CBTSHT(K)
1771 30 ENDDO
1772 C IF(ICNT.GT.4) THEN
1773 C     CALL LEGEND @----->( 67)
1774 C     PRINT 87
1775 C     CALL TITLE 8----->( 50)
1776 C     ICNT=1
1777 C ENDIF
1778 C

```

```

1779 C      ++++++
1780 C      +
1781 C      + PRINT INFO FOR THIS SSI
1782 C      +
1783 C      ++++++
1784 C
1785 C      PRINT 200,NACC,MOS
1786 C      PRINT 201,(GRD(K),STRTH(K),COMBAT(K),CONUS(K),LONG(K),SHORT(K),
1787 C      1 CBTCNS(K),CBTLNG(K),CBTSHT(K),ROREQ(K),CMT(K),MAX48(K),K=1,5)
1788 C      DO 110 K=1,9
1789 C      TOTAL(K)=0
1790 C      110 ENDDO
1791 C      +
1792 C      +
1793 C      + TOTAL AND PRINT TOTALS FOR THIS SSI
1794 C      +
1795 C      ++++++
1796 C
1797 C
1798 C      DO 115 K=1,5
1799 C      TOTAL(1)=TOTAL(1)+STRTH(K)
1800 C      TOTAL(2)=TOTAL(2)+COMBAT(K)
1801 C      TOTAL(3)=TOTAL(3)+CONUS(K)
1802 C      TOTAL(4)=TOTAL(4)+LONG(K)
1803 C      TOTAL(5)=TOTAL(5)+SHORT(K)
1804 C      TOTAL(6)=TOTAL(6)+CBTCNS(K)
1805 C      TOTAL(7)=TOTAL(7)+CBTLNG(K)
1806 C      TOTAL(8)=TOTAL(8)+CBTSHT(K)
1807 C      TOTAL(9)=TOTAL(9)+ROREQ(K)
1808 C      115 ENDDO
1809 C      PRINT 205, TOTAL
1810 C      ENDIF
1811 C      GO TO 5
1812 C
1813 C      +
1814 C
1815 C      + ENTRY POINT FOR EOF ON FILE IFILE. PRINT GRAND TOTALS.
1816 C
1817 C
1818 C
1819 C      999 CALL LEGEND 3-----> ( 57)
1820 C      PRINT 87
1821 C      CALL TITLE 3-----> ( 50)
1822 C      PRINT 209
1823 C      PRINT 210, GTOT
1824 C      PRINT 87
1825 C      RET=0
1826 C      <-RETURN 1
1827 C      200 FORMAT('0',30X,A1,A3,2X,5('TOTAL',2X),'CONUS',3X,'LONG',2X,'SHORT',
1828 C      1 ,3X,'MALE',2X,'MEAN',35X,'PERSACS',1X,'M-ONLY',1X,'CONUS',3X,
1829 C      2 LONG',2X,'SHORT',2X,3('M-ONLY',1X),ROREQ,2X,'CONUS',37X,B(A
1830 C      3 UTH,3X),REG,3X,TOUR/)
1831 C      201 FORMAT('0',31X,A3,9I7,I6,A1)
1832 C      205 FORMAT('0',30X,'TOTAL',I6,8I7)
1833 C      87 FORMAT('0',T58,'**UNCLASSIFIED**')
1834 C      210 FORMAT('0',30X,'GRAND',30X,'TOTAL',I6,8I7)
1835 C      209 FORMAT('0',36X,5('TOTAL',2X),'CONUS',3X,'LONG',2X,'SHORT',3X,'MALE
1836 C      1 ,35X,'PERSACS',1X,'M-ONLY',1X,'CONUS',3X,'LONG',2X,'SHORT',2X
1837 C      2 ,3('M-ONLY',1X),ROREQ,37X,B(AUTH,3X),REQ/)
1838 C
1839 C      END SUBROUTINE ROTREP

```

```
1840 C SUBROUTINE LEGEND
1841 C ****
1842 C *
1843 C * SUBROUTINE LEGEND
1844 C *
1845 C * PRINTS LEGEND AT THE BOTTOM OF EVERY PAGE OF THE FULL REPORT
1846 C *
1847 C ****
1848 C
1849 C
1850 C PRINT 75
1851 C PRINT 76
1852 C PRINT 90
1853 C PRINT 76
1854 C PRINT 91, MAXCL
1855 C PRINT 76
1856 C PRINT 92
1857 C PRINT 76
1858 C PRINT 77
1859 C--> RETURN
1860 75 FORMAT('0',T40,'*',54(''),'*')
1861 76 FORMAT(' ',T40,'|',54(''),'|')
1862 77 FORMAT(' ',T40,'+',54(''),'+')
1863 93 FORMAT(' ',T40,'|',3X,'* Denotes Non-Accession Specialty',18x,'|')
1864 91 1 FORMAT(' ',T40,'|',3X,'+ Denotes Mean Conus Tour Length Exceeds',I
1865 92 3, Months',1X,'|',3X,'- Denotes No Conus Authorizations',18x,'|')
1866 92 FORMAT(' ',T40,'|',3X,'- Denotes No Conus Authorizations',18x,'|')
1867 C
1868 C END SUBROUTINE LEGEND
```

```

1869 C SUBROUTINE PREDIS($)
1870 C ****
1871 C *
1872 C * SUBROUTINE PREDIS
1873 C *
1874 C * MODIFIES WOSM FEMALE STRENGTH DISTRIBUTION BY APPLYING A
1875 C * DISTRIBUTION FILE WHICH CONTAINS THE SPC AND ITS DESIRED
1876 C * DISTRIBUTION RATE. THIS RATE IS APPLIED TO THE FEMALE
1877 C * STRENGTH NUMBERS BY GRADE AND SSI. A NEW FILE 10 IS CREATED
1878 C * FOR INPUT IN THE AGEBGPR MODEL.
1879 C *
1880 C ****
1881 C
1882 C
1883 C INTEGER PCT(MAXCMF),ISP,JCMF,I,J,K,CMFTOT(6)
1884 C CHARACTER F28*12
1885 C DATA F28 /'BASG,T 28 . '/
1886 C JCMF=0
1887 C REWIND 10
1888 C
1889 C
1890 C
1891 C * ASSIGN NEW WORKING FILE 28
1892 C
1893 C
1894 C
1895 C CALL FACSF(F28) @-----> ( 71)
1896 C
1897 C
1898 C
1899 C * READ IN PREFERRED DISTRIBUTION
1900 C
1901 C
1902 C
1903 C I=1
1904 300 READ(5,301,END=302) ISP,PCT(I)
1905 C I=I+1
1906 C GO TO 300
1907 C
1908 C
1909 C
1910 C * REDISTRIBUTE FEMALE STRENGTH NUMBERS BY PREDIS RATES
1911 C
1912 C
1913 C
1914 302 CALL READR($400) @-----> ( 47)
1915 C J=JCMF
1916 C IF(JCMF.EQ.0) THEN
1917 C   JCMF=JCMF
1918 C   DO 303 K=1,5
1919 C     CMFTOT(K)=0
1920 303 ENDDO
1921 C ENDIF
1922 C FEMACC(6)=0
1923 C CALL SPCONV(J,CMFTAB,NUMCMF) @-----> ( 64)
1924 C DO 305 I=1,5
1925 C   FEMACC(I)=(FEMACC(I)*(FLOAT(PCT(J))/1000.0))+0.5
1926 C   FEMACC(6)=FEMACC(6)+FEMACC(I)
1927 C   THSREQ(I)=FLOAT(FEMACC(I))*(TTHSPC/(1.0-TTHSPC))+0.5
1928 305 ENDDO
1929 C WRITE(28) JCMF,MOS,STRTH,COMBAT,NONCOM,VALE,TAADS,FEMACC,CONTNT,
1930 C CARPRO,ROTREQ,CMT,RATIO,LTAADS,STAADS,CTAADS,CASREP,VACC,RCAS,
1931 C THSREQ,TTHSPC,MAX48
1932 C IF(JCMF.EQ.1CMF) THEN
1933 C   DO 310 K=1,6
1934 C     CMFTOT(K)=CMFTOT(K)+FEMACC(K)

```

```
1935 310      ENDDO
1936      ELSE
1937          WRITE(10,311) JCMF,(CMFTOT(K),K=5,1,-1),CMFTOT(6)
1938          JCMF=ICMF
1939          DO 312 K=1,6
1940          CMFTOT(K)=FEMACC(K)
1941 312      ENDDO
1942      ENDIF
1943      GO TO 302
1944 C
1945 C
1946 C
1947 C      + ENTRY POINT FOR EOF ON FILE IFILE - SET IFILE TO 28
1948 C      + AND PRODUCE PREFERRED DISTRIBUTION REPORT FOR ALL
1949 C      + GRADES.
1950 C
1951 C
1952 C
1953 400      WRITE(10,311) JCMF,(CMFTOT(K),K=5,1,-1),CMFTOT(6)
1954      IFILE=28
1955      REWIND IFILE
1956      MAXGRD=5
1957      RTAB=  PREFERRED DISTRIBUTION
1958      CALL CMFT($410) @-----> ( 60)
1959 410      <--RETURN 1
1960 C
1961 301      FORMAT(I2,15)
1962 311      FORMAT(I3,6I5)
1963 C
1964 C      END SUBROUTINE PPDIS
```



```
2007 C SUBROUTINE FACSF (ARG)
2008 C ****
2009 C *
2010 C * SUBROUTINE FACSF
2011 C *
2012 C * THIS ROUTINE SUBMITS AN EXECUTIVE CONTROL IMAGE (ARG) FOR
2013 C * INTERPRETATION AND PROCESSING
2014 C *
2015 C ****
2016 C
2017 C FACSF IS USED IN THIS PROGRAM TO DASG TEMPORARY MASS
2018 C STORAGE FILES. ARG SHOULD BE A STANDARD SPERRY CONTROL
2019 C IMAGE.
2020 C *
2021 C ****
2022 C *
2023 C * REFERENCE : ASCII FORTRAN LEVEL 10R1 PROGRAMMER REFERENCE
2024 C UP-8244.2
2025 C *
2026 C *
2027 C ****
2028 C
2029 C END SUBROUTINE FACSF
```

```
2030 C SUBROUTINE ADATE (DATE,TIME)
2031 C ****
2032 C * SUBROUTINE ADATE
2033 C * RETURNS THE CURRENT DATE AND TIME
2034 C ****
2035 C THE ARGS DATE AND TIME SHOULD BE CHARACTER VARIABLES OF
2036 C EIGHT CHARACTERS IN LENGTH. DATE IS RETURNED AS 'MMDDYY'
2037 C AND TIME IS RETURNED AS 'HHMMSS'.
2038 C ****
2039 C
2040 C
2041 C
2042 C
2043 C
2044 C
2045 C
2046 C
2047 C
2048 C
2049 C
2050 C END
```

LINE PAGE ***** MODULE INVOCATION TREE *****

PAGE 73

1 35 MAIN
2 70 . OPT
3 64 . SPCONV
4 71 . FACSF
5 40 . FILER
6 54 . : DATA
7 64 . : SPCONV
8 50 . FRPT
9 58 . DIST
10 56 . : SUMR
11 50 . : TITLE
12 72 . : : ADATE
13 63 . : : TYPE
14 47 . : : READR
15 47 . : : READR
16 51 . : : TOTLE
17 67 . : : LEGEND
18 53 . : : GRAND
19 47 . : : READR
20 60 . : CMFT
21 47 . : : READR
22 50 . : : TITLF
23 . . : ** SEE LINE 11
24 48 . : MAXRPT
25 50 . : : TITLE
26 . . : ** SEE LINE 11
27 47 . : : READR
28 65 . : ROTREP
29 50 . : : TITLE
30 . . : ** SEE LINE 11
31 47 . : : READR
32 67 . : : LEGEND
33 68 . : PREDIS
34 71 . : : FACSF
35 47 . : : READR
36 64 . : : SPCONV
37 60 . : : CMFT
38 . . : : ** SEE LINE 20

MODULE
CROSS REFERENCE LISTING

PAGE 74

ADATE	PAGE	50	ENTRY TITLE	914
	PAGE	72	SUBROUTINE ADATE	2030
CMFT	PAGE	30	PROGRAM MAIN	264
	PAGE	60	SUBROUTINE CMFT	1448
	PAGE	62		1616
	PAGE	69	SUBROUTINE PREDIS	1958
DATA	PAGE	40	SUBROUTINE FILER	376
	PAGE	46		730
	PAGE	54	SUBROUTINE DATA	1176
	PAGE	55		1240
	PAGE	63	SUBROUTINE TYPER	1629
	PAGE	68	SUBROUTINE PREDIS	1885
DIST	PAGE	30	PROGRAM MAIN	262
	PAGE	58	SUBROUTINE DIST	1316
	PAGE	59		1447
FACSF	PAGE	38	PROGRAM MAIN	243
	PAGE	69	SUBROUTINE PREDIS	1805
	PAGE	71	SUBROUTINE FACSF	2007
FILER	PAGE	38	PROGRAM MAIN	258
	PAGE	40	SUBROUTINE FILER	317
	PAGE	46		734
FRPT	PAGE	39	PROGRAM MAIN	240
	PAGE	50	SUBROUTINE FRPT	876
	PAGE	53	ENTRY GRAND	1135
GRAND	PAGE	53	ENTRY GRAND	1008 1133
	PAGE	57	SUBROUTINE SUMR	1311
	PAGE	66	SUBROUTINE ROTREP	1834
LEGEND	PAGE	53	ENTRY TOTLE	1082
	PAGE	65	SUBROUTINE ROTREP	1773
	PAGE	66		1819
	PAGE	67	SUBROUTINE LEGEND	1840 1869
MAIN	PAGE	35	PROGRAM MAIN	1
MAXRPT	PAGE	39	PROGRAM MAIN	272
	PAGE	48	SUBROUTINE MAXRPT	755
	PAGE	49		875
OPT	PAGE	37	PROGRAM MAIN	132
	PAGE	70	SUBROUTINE OPT	1965 1977 2006
PREDIS	PAGE	39	PROGRAM MAIN	278
	PAGE	68	SUBROUTINE PREDIS	1569
	PAGE	69		1964
READR	PAGE	47	SUBROUTINE READR	735 754
	PAGE	48	SUBROUTINE MAXRPT	806
	PAGE	50	ENTRY TITLE	973
	PAGE	56	SUBROUTINE SUMR	1278
	PAGE	58	SUBROUTINE DIST	1358
	PAGE	60	SUBROUTINE CMFT	1506
	PAGE	65	SUBROUTINE ROTREP	1744
	PAGE	68	SUBROUTINE PREDIS	1914
ROTREP	PAGE	30	PROGRAM MAIN	275

MODULE
CROSS REFERENCE LISTING

PAGE 75

PAGE	65	SUBROUTINE ROTREP	1714
PAGE	66		1879
SPCONV			
PAGE	38	PROGRAM MAIN	228
PAGE	41	SUBROUTINE FILER	401
PAGE	64	SUBROUTINE SPCONV	1664 1713
PAGE	68	SUBROUTINE PREDIS	1923
SUMR			
PAGE	56	SUBROUTINE SUMR	1241
PAGE	57		1315
PAGE	58	SUBROUTINE DIST	1336
TITLE			
PAGE	48	SUBROUTINE MAXRPT	777
PAGE	49		874
PAGE	50	ENTRY TITLE	913
PAGE	56	SUBROUTINE SUMR	1263
PAGE	61	SUBROUTINE CMFT	1564
PAGE	65	SUBROUTINE ROTREP	1773 1775
PAGE	66		1821
TOTLE			
PAGE	51	ENTRY TOTLE	996
PAGE	56	SUBROUTINE SUMR	1286
TYPER			
PAGE	50	ENTRY TITLE	919
PAGE	63	SUBROUTINE TYPER	1617 1663

6. MODIFY CONTINUATION RATES

6.1. SOURCE CODE

This program should be used by all DASYS users until viable female continuation rates can be obtained. Female continuation rates are extracted from the overall female continuation rates for each specialty code by using the percentage difference of the male-female overall continuation rates and the female overall continuation rates and then applying these percentage differences against the male-female specialty continuation rates.

This ASCII FORTRAN Listing was prepared using the SAI-SDDL processor.

```

1 C
2 C
3 C
4 C
5 C
6 C
7 C
8 C
9 C
10 C
11 C
12 C
13 C
14 C
15 C
16 C
17 C
18 C
19 C
20 C
21 C
22 C
23 C
24 C
25 C
26 C
27 C
28 C
29 C
30 C
31 C
32 C
33 C
34 C
35 C
36 C
37 C
38 C
39 C
40 C
41 C
42 C
43 C
44 C
45 C
46 C
47 C
48 C
49 C
50 C
51 C
52 C
53 C
54 C
55 C
56 C
57 C
58 C
59 C
60 C
61 C
62 C
63 C
64 C
65 C
66 C
PROGRAM MAIN
***** THIS PROGRAM CREATES FEMALE CONTINUATION RATES BASED ON THE
* MALE AND OVERALL CONTINUATION RATES CURRENTLY USED.
*****
REAL OVRCOM(30), OVRWOM(30), OVRPCT(30), SPCCOM(30), SPCWMN(30),
SAVWOM(30), NEWWOM(30), SAVCOM(30), SAVWMN(30), NONCOM(30), NONWMN(30),
ACCCOM(30), ACCWMN(30), NONPCT(30), ACCPCT(30)
INTEGER I,J,ICMF,JCMF,NONACC(36),A(36)
CHARACTER IN15*58,IN16*65
+-----+
+ INPUT VALID SPECIALTY CODES AND TYPE OF SPECIALTY CODE
+-----+
DO 1 I=1,36
  READ(12,4,END=2) A(I),NONACC(I)
  FORMAT( )
ENDDO
+-----+
+ INPUT OVERALL CRATE FILES FOR COMBINED AND FEMALE OFFICERS
+-----+
READ(5,6) SAVCOM
READ(5,6) SAVWMN
FORMAT( )
+-----+
+ CALCULATE CUMULATIVE DATA POINTS FOR COMBINED AND FEMALE CRATES
+-----+
+-----+
+-----+
+-----+
DC 9 I=1,30
  NONCOM(I)=SAVCOM(I)
  NONWMN(I)=SAVWMN(I)
  ACCCOM(I)=SAVCOM(I)
  ACCWMN(I)=SAVWMN(I)
  IF(I.LE.9) THEN
    NONCOM(I)=SAVWMN(I)
  ENDIF
ENDDO
DO 10 I=1,30
  ACCPCT(I)=0.0
  NONPCT(I)=0.0
  IF(I.GT.1) THEN
    NONCOM(I)=NONCOM(I)*NONCOM(I-1)
    NONWMN(I)=NONWMN(I)*NONWMN(I-1)
    ACCCOM(I)=ACCCOM(I)*ACCCOM(I-1)
    ACCWMN(I)=ACCWMMN(I)*ACCWMMN(I-1)
  ENDIF
  IF(NONCOM(I).GT.0.0) THEN
    NONPCT(I)=NONWMN(I)/NONCOM(I)
  ENDIF
ENDDO

```

```

67
68      IF(ACCCOM(I).GT.0.0) THEN
69          ACCPCT(I)=ACCWMN(I)/ACCCOM(I)
70      ENDIF
71 10  ENDDO
72 C
73 C
74 C
75 C
76 C
77 C
78 C
79 11 READ(10,6,END=999) ICMF,SPCCOM
80      READ(11,6) JCMF,SAVWOM
81 C
82 C
83 C
84 C
85 C
86 C
87 C
88 C
89      IF(ICMF.NE.JCMF) THEN
90          GO TO 998
91      ENDIF
92 C
93 C
94 C
95 C
96 C
97 C
98 C
99 DO 12 I=1,36
100     IF(ICMF.EQ.A(I)) THEN
101         IF(NONACC(I).EQ.1) THEN
102             DO 15 J=1,30
103                 OVRCOM(J)=NONCOM(J)
104                 OVRWOM(J)=NONWMN(J)
105                 OVRPCT(J)=NONPCT(J)
106                 IF(OVRPCT(J).GT.1.00) THEN
107                     OVRPCT(J)=1.00
108                 ENDIF
109                 IF(J.LE.8) THEN
110                     SPCCOM(J)=SAVWMN(J)
111                 ENDIF
112 15  ENDDO
113     ELSE
114         DO 16 J=1,30
115             OVRCOM(J)=ACCCOM(J)
116             OVRWOM(J)=ACCWMN(J)
117             OVRPCT(J)=ACCPCT(J)
118             IF(OVRPCT(J).GT.1.00) THEN
119                 OVRPCT(J)=1.00
120             ENDIF
121 16  ENDDO
122     ENDIF
123 ENDDO
124 12
125 C

```

```

126 C
127 C
128 C
129 C
130 C
131 C
132 C
133 C
134 C
135 DO 13 I=1,30
136 NEWWOM(I)=0.0
137 IF(I.GT.1) THEN
138   SPCCOM(I)=SPCCOM(I)*SPCCOM(I-1)
139 ENDIF
140 SPCWOM(I)=SPCCOM(I)*OVRPCT(I)
141 IF((I.GT.1).AND.(SPCWOM(I-1).GT.0.0)) THEN
142   NEWWOM(I)=SPCWOM(I)/SPCWOM(I-1)
143 ENDIF
144 IF(I.EQ.1) THEN
145   NEWWOM(I)=SPCWOM(I)
146 ENDIF
147 IF(NEWWOM(I).GE.1.00) THEN
148   NEWWOM(I)=0.999
149   SPCWOM(I)=SPCWOM(I-1)*NEWWOM(I)
150 ENDIF
151 13 ENDDO
152 C
153 C
154 C
155 C
156 C
157 C
158 C
159 WRITE(13,25) ICMF,(NEWWOM(I),I=1,10)
160 WRITE(13,26) (NEWWOM(I),I=11,20)
161 WRITE(13,26) (NEWWOM(I),I=21,30)
162 25 FORMAT(I2,10(1X,F4.3))
163 FORMAT(9(F4.3,1X),F4.3)
164 C
165 C
166 C
167 C
168 C
169 C
170 C
171 WRITE(15,50) ICMF
172 50 FORMAT(10X,'SPC',13,1X,' CONTINUATION RATE DATA'//11X,30(' '))
173 WRITE(15,51)
174 51 FORMAT(10X,'CUM',5X,'CUM-FEM',6X,2('CUM-SPC',1X),1X,'GIVEN',5X
175 , 'CALC')
176 1 WRITE(15,52)
177 52 FORMAT(10X,'OVERALL',1X,'OVERALL',1X,'PCT',2X,'OVERALL',1X,2('
178 FEMALE',3X,1X,'FEMALE'))
179 1 WRITE(15,53)
180 53 FORMAT(10X,'YOS',1X,'CRATE',3X,'CRATE',3X,'DIFF',1X,2('CRATE',3
181 X),1X,'CRATE',5X,'CRATE'))
182 1 DO 60 I=1,30
183 60  WRITE(15,55) I,OVRCOM(I),OVRWOM(I),OVRPCT(I),SPCCOM(I),SPCWOM(I
184 ,1),SAVWOM(I),NEWWOM(I)
185 55 1 FORMAT(10X,6X,I3,2X,F4.3,4X,F4.3,3X,F4.2,2X,F4.3,4X,F4.3,5X,F4
186 ,3,6X,F4.3)
187 60 1 ENDDO
188 CALL GRAPH(SPCWOM)----->( P1)
189 GO TO 11
190 C

```

```
191 C      ++++++ ERROR MESSAGE ++++++
192 C      +
193 C      + *** ERROR MESSAGE ***
194 C      +
195 C      ++++++ MISMATCHED SPCS IN COMBINED AND FEMALE DATA FILE
196 C
197 998    WRITE(6,61)
198 61     FORMAT('0',5X,'** MISMATCHED SPCS IN COMBINED AND FEMALE DATA FILE
199 1      S **')
200 C
201 C      +
202 C      + NORMAL EXIT
203 C      +
204 C      +
205 C      ++++++
206 C
207 999    REWIND 15
208 C
209 C      +
210 70----- DO 69 I=1,7
211 C      READ(15,72,END=9999) IN15
212 72     FORMAT(7X,A58)
213 C      IF((I.EQ.1).AND.(J.EQ.1)) THEN
214 C      WRITE(6,74) IN15
215 74     FORMAT('1',A58)
216 C      J=2
217 C      ELSE
218 C      IF((I.EQ.1).AND.(J.EQ.2)) THEN
219 C      WRITE(6,75) IN15
220 75     FORMAT('0',//1X,A58)
221 C      J=1
222 C      ELSE
223 C      WRITE(6,77) IN15
224 77     FORMAT(' ',A58)
225 C      ENDIF
226 C      ENDIF
227 69     ENDDO
228 C      DO 89 I=1,30
229 C      READ(15,72) IN15
230 80     IF(I.LE.26) THEN
231 C      READ(16,80) IN16
232 C      FORMAT(A65)
233 C      WRITE(6,83) IN15,IN16
234 83     FORMAT(' ',A58,4X,A65)
235 C      ELSE
236 C      WRITE(6,77) IN15
237 C      ENDIF
238 89     ENDDO
239 C      GO TO 70
240 9999   WRITE(6,65)
241 65     FORMAT('0///,10X, "====> NEW CRATE FILE AT FILE 13 <====")  
STOP
242
243 FND
```

```

244
245      SUBROUTINE GRAPH(POINTS)
246      REAL POINTS(30)
247      INTEGER I,J,K
248      CHARACTER GRAF(23,64)*1,NUM(10)*1
249      DATA (NUM(I),I=1,10) /'1','2','3','4','5','6','7','8','9','0'/
250
251      C
252      C      ++++++ BUILD X AND Y AXIS SYSTEM ++++++
253      C
254      C
255      C      ++++++ DO 10 I=1,22
256      C      DO 11 J=1,64
257      C      GRAF(I,J)=' '
258      C      IF((J.EQ.4).AND.(I.LE.21)) THEN
259      C      GRAF(I,J)='+'-
260      C      ENDIF
261      C      IF((I.EQ.21).AND.(J.GT.4)) THEN
262      C      GRAF(I,J)='+'-
263      C      ENDIF
264
265      11    ENDDO
266
267      C
268      C      ++++++ LABEL AXIS SYSTEM ++++++
269      C
270      C      ++++++ DO 12 I=1,21,2
271      C      J=9
272      C      DO 13 J=6,64,2
273      C
274      C      GRAF(I,3)='0'
275      C      IF(I.EQ.1) THEN
276      C      GRAF(I,1)='1'
277      C      GRAF(I,2)='0'
278      C      ELSE
279      C      IF(I.LT.21) THEN
280      C      GRAF(I,2)=NUM(J)
281      C      J=J-1
282      C      ENDIF
283
284      C      ENDIF
285
286      12    ENDDO
287
288      C      I=1
289      C      DO 13 J=6,64,2
290      C      IF(J.LE.22) THEN
291      C      GRAF(22,J)=NUM(I)
292      C      I=I+1
293      C      ELSE
294      C      IF(J.LE.42) THEN
295      C      GRAF(22,J)='1'
296      C      GRAF(23,J)=NUM(I)
297      C      I=I+1
298      C      IF(I.GT.10) THEN
299      C      I=1
300      C      ENDIF
301
302      C      ELSE
303      C      IF(J.LE.62) THEN
304      C      GRAF(22,J)='2'
305      C      GRAF(23,J)=NUM(I)
306      C      I=I+1
307      C      IF(I.GT.10) THEN
308      C      I=1
309      C      ENDIF
310
311      C      ELSE
312      C      GRAF(22,J)='3'

```

```
310           GRAF(23,J)='0'
311           ENDIF
312           ENDIF
313           ENDDO
314 13      C
315           +
316           +
317           + PLOT DATA POINTS
318           +
319           +
320           +
321           +
322           I=1
323           DO 15 J=6,64,2
324           K=IFIX((21.0-(POINTS(I)*100.0)/5.0)+0.5)
325           IF((K.GT.0).AND.(K.LT.21)) THEN
326               GRAF(K,J)='*'
327           ENDIF
328           I=I+1
329 15      ENDDO
330           +
331           +
332           +
333           + WRITE DISPLAY TO FILE 16
334           +
335           +
336           +
337           WRITE(16,20)
338 20      FORMAT(18X,'% FEMALE OFFICERS REMAINING')
339           DO 19 I=1,23
340               WRITE(16,22) (GRAF(I,J),J=1,64)
341               FORMAT(64A1)
342 19      ENDDO
343           WRITE(16,26)
344 24      FORMAT(1,25X,'YEAR OF SERVICE')
345           --RETURN
346           END
```

1313

6.2. RUNSTREAM

1314 The following runstream is used to produce the mod
1315 ified female continuation rates:

13118 ASG,T 10. • ASSIGN TEMPORARY MASS STORAGE
13119 ASG,T 11. •
13220 ASG,T 12. •
13221 ASG,T 15. •
13222 ASG,T 16. •
13223 ASG,T 13. •
13224 EED 8082CRATE-SC,10. • M/F SPC CONTINUATION RATES
13225 EED 8082CRATE-SC/FEM,11. • FEW CONTINUATION RATES
13226 EED SPECS,12. • SPECIALTY CODES FILE
13227 XQT MOD/CRATES • EXECUTE THE PROGRAM
13228 ADD 8082CRATE • M/F OVERALL CRATES
13229 ADD 8082CRATE/FEM • FEW OVERALL CRATES

